INPUT

Market Forecast Program

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WORLDWIDE MARKET FORECAST PROGRAM

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Worldwide

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Market Profile

A Publication from INPUT's Worldwide Market Forecast Program

World Wide

Key Market Statistics 1997

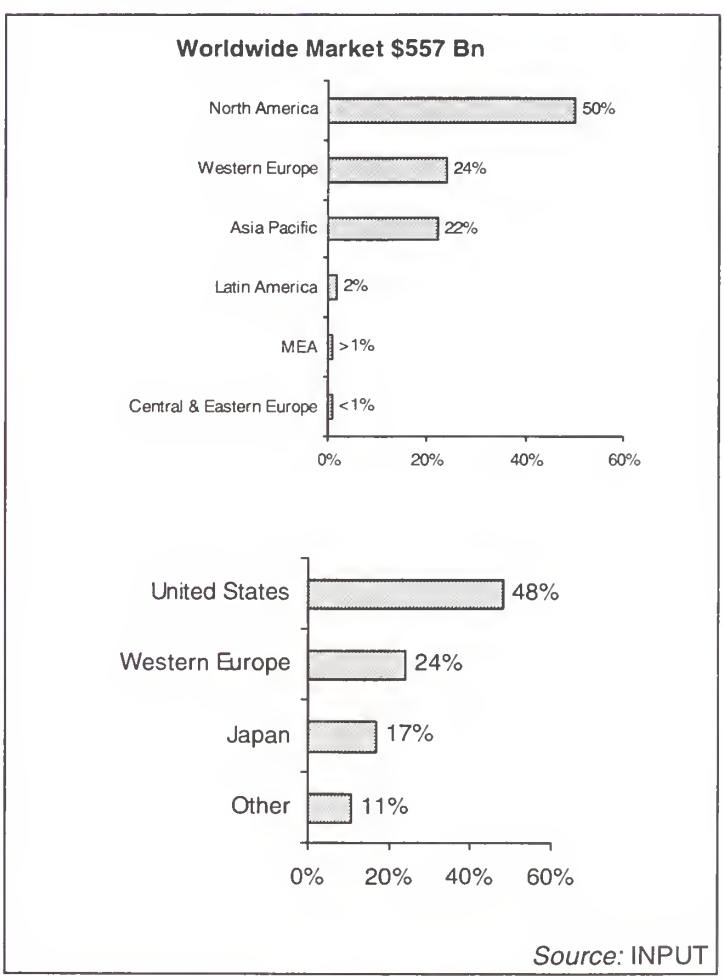
The Total World Wide IT Software & Services market is analyzed into six major regions, see Exhibit 1.

Key Statistics are:

- Total IT Software & Services Market 1997 -$557 Billion.
- Internet/Intranet Services Market 1997 - $38 Billion
- Total IT User Expenditure $1.5 Trillion
- GDP $30.7 Trillion

Exhibit 1

IT Software & Services Markets



Source: INPUT

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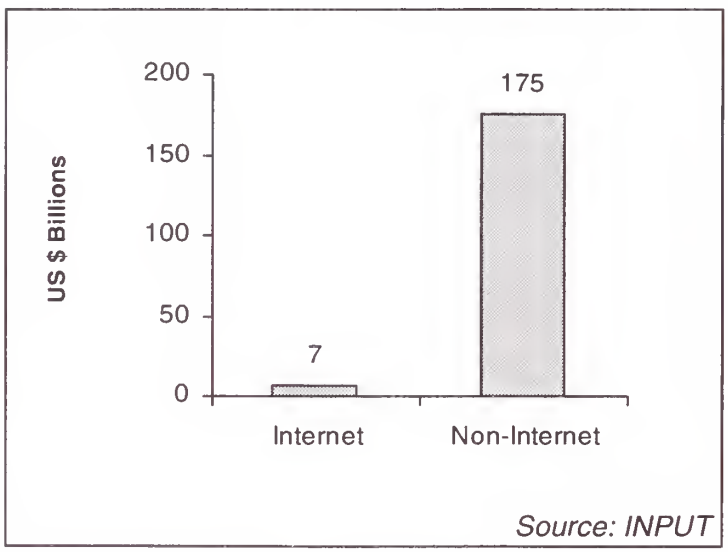
Key Indicators

- The IT Software & Services Market is estimated to represent 37% of all IT user expenditure.
- The Internet /Intranet Services proportion accounts for 6.5% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically World Wide in 1997 is estimated to be about $182 billion, see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- World Wide 1997

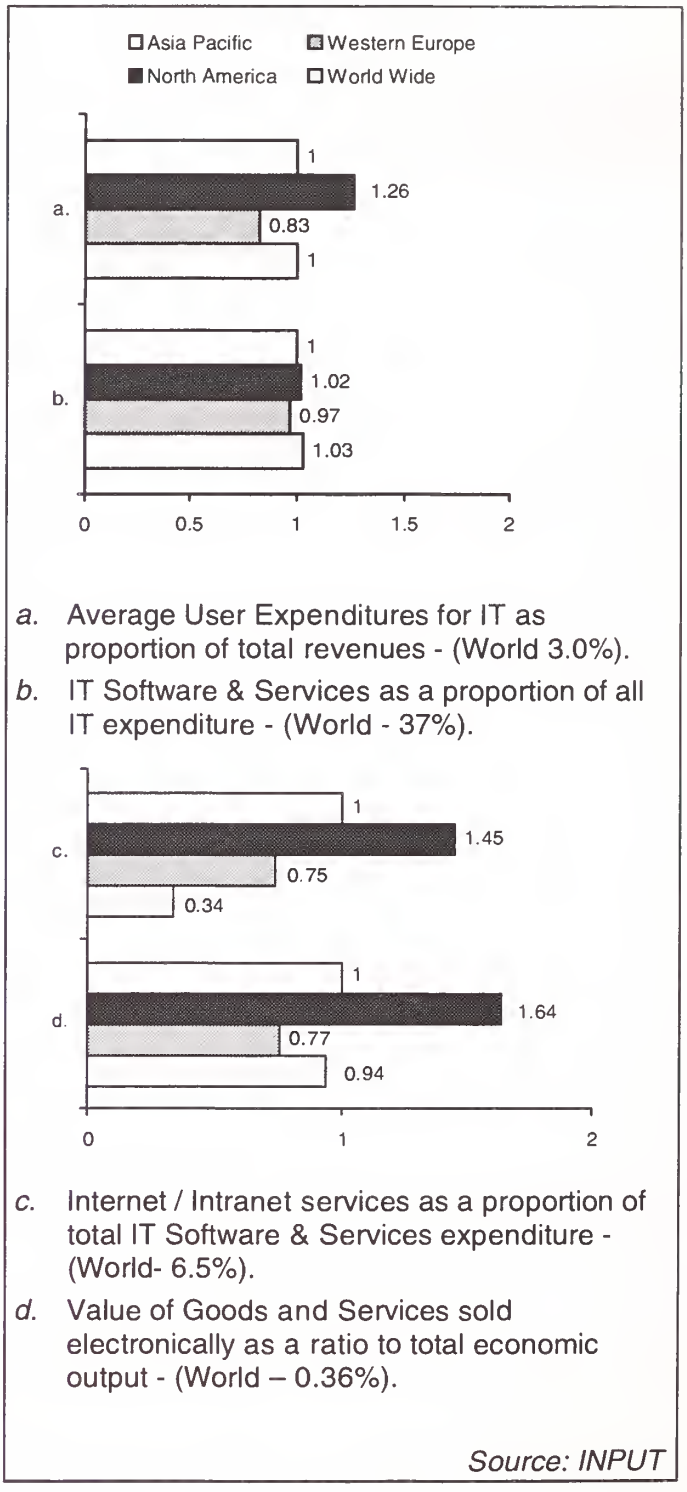


Source: INPUT

- Exhibit 3 shows key regional comparative ratios that indicate the relative development of IT, the Internet and Electronic Commerce in different regions.
- The ratios are normalised to the value of 1.0 for the World.

Exhibit 3

Comparative Ratios



a. Average User Expenditures for IT as proportion of total revenues - (World 3.0%).

b. IT Software & Services as a proportion of all IT expenditure - (World - 37%).

c. Internet / Intranet services as a proportion of total IT Software & Services expenditure - (World- 6.5%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (World – 0.36%).

Source: INPUT

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Economic Context

The World wide forecast for the IT Software & Services market is based on a fundamentally positive economic scenario despite the Far Eastern economic crisis.

The consensus forecast for GDP growth is now at around the 3.5% per annum level down from the 4% previously predicted.

The positive scenario put forward here views the Far Eastern crisis as a timely intervention that brakes economic growth and consequent inflationary fears, that would otherwise have been addressed by the intervention of central banks with a rise in interest rates.

However, the possibility exists for a far worse financial impact on the world economy than that forecast here given that the global integration of the world economy is not yet fully understood.

The recent US experience in which economic growth has continued without the appearance of inflation and with low levels of unemployment has led many to believe that the advanced economies are now beginning to obey a new set of rules.

These changes have occurred at a time of increased levels of international trade and globalized financial services. Under these new circumstances little is known of the possible full impact of what is currently happening in the Far East.

As in previous economic crises the scope for wrong policy moves by the authorities is very real and so should not be discounted.

GDP deflator assumptions for the World in 1998 are:

For all OECD countries - 3.4%

For the smaller high inflation countries - 9.3%

For OECD excluding high inflation countries - 1.9%.

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services is shown in Exhibit 4.

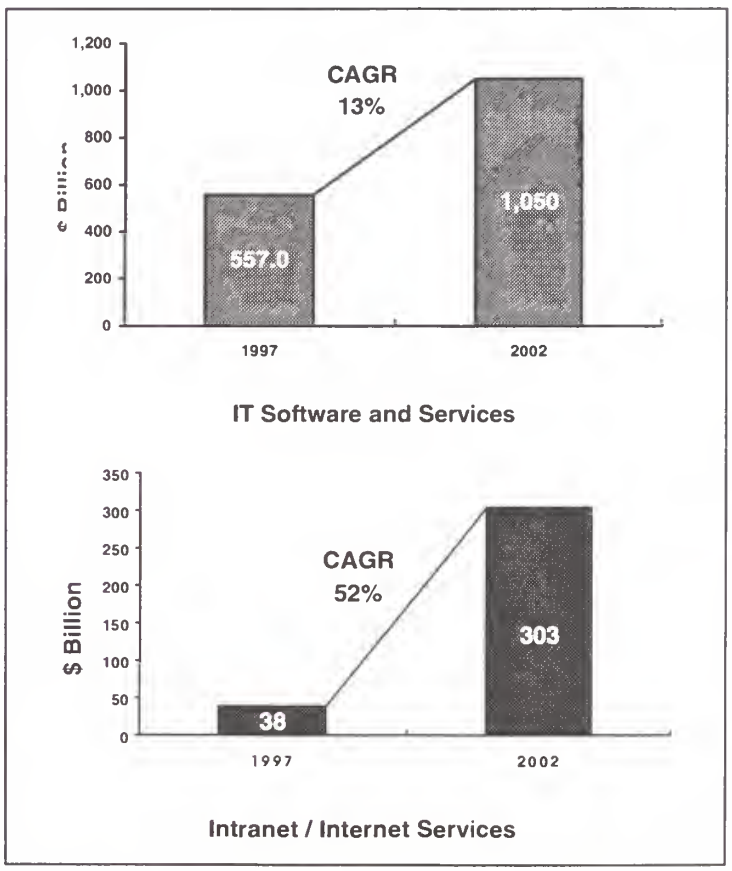
Forecasts for the nine principal categories of information services expenditure in the World-Wide market are shown in Exhibit 5.

Exhibit 6 provides an assessment of all user expenditures on IT including internal staff and facilities. In this analysis six distinct components of IT expenditure are recognised.

Forecasts for each INPUT service category are provided in Exhibit 7.

Exhibit 4

IT Software & Services World Wide



Source: INPUT

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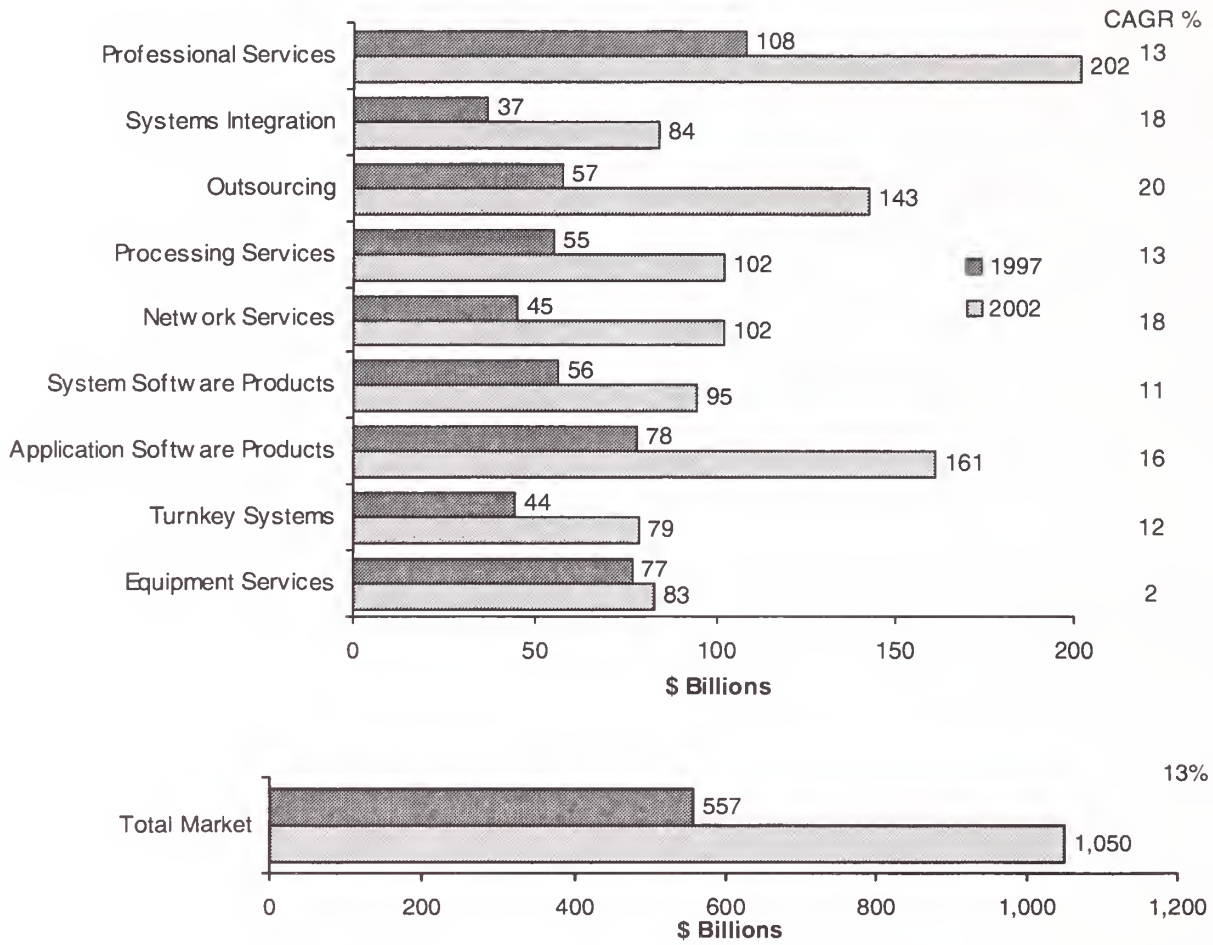
Exhibit 5

IT Software & Services Market Growth - World Wide 1997 - 2002



Source: INPUT

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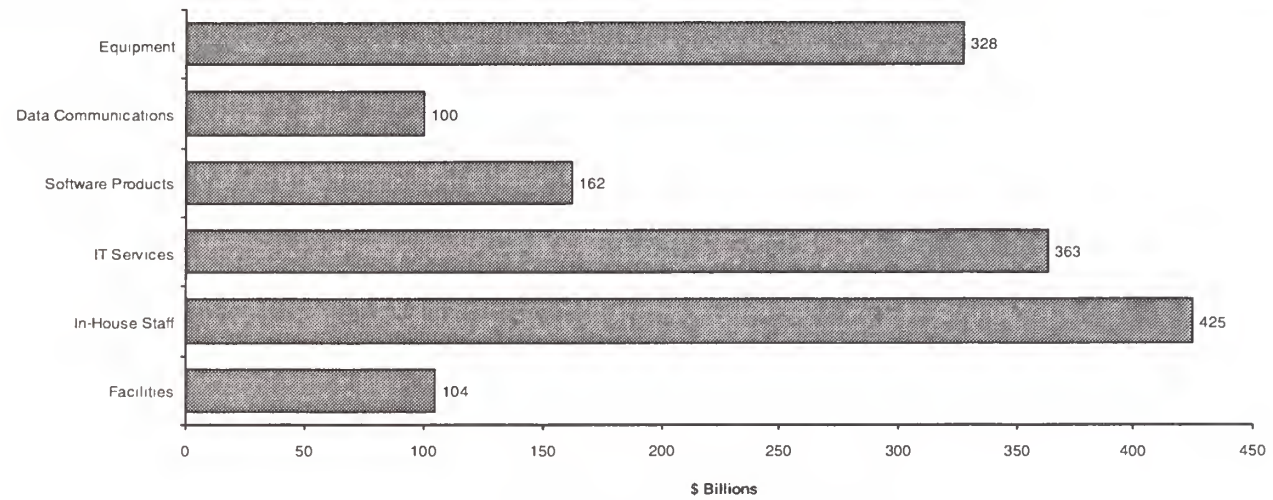
Exhibit 6

Total Information Technology Related Expenditures - World Wide 1997



Total IT Expenditure $1,480 Billion

Source: INPUT

Exhibit 7

IT Software & Services Market
Forecast by Product/Services Category World Wide, 1997-2002

Delivery Modes	U.S. $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	96,541	12%	108,258	123,009	140,161	157,689	185,412	201,721	13%
Systems Integration	32,551	15%	37,409	43,512	51,008	60,081	70,872	83,910	18%
Outsourcing	46,716	21%	56,598	68,499	82,393	98,802	118,742	142,755	20%
Processing Services	50,568	9%	55,332	61,926	69,814	78,999	89,638	102,246	13%
Network Services	38,429	18%	45,203	52,708	61,788	72,655	85,787	101,808	18%
Application Software	67,747	15%	77,654	89,098	102,425	118,565	137,832	161,141	16%
System Software	49,604	12%	55,593	61,663	68,340	75,851	84,492	94,512	11%
Turnkey Systems	40,484	10%	44,492	49,716	55,706	62,618	70,303	79,152	12%
Equipment Services	76,121	1.0%	76,658	77,630	78,839	79,916	81,330	82,620	2%
Grand Total	498,761	12%	557,197	627,761	710,474	805,176	924,408	1,049,865	14%

Source: INPUT

This Profile is issued as part of INPUT's World-Wide IT Software & Services Market Forecast Program. If you have questions or comments on this profile, please call your local INPUT organisation or Peter Lines at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, Tel: 650 961 3300 email: plines@input.com

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Market Profile

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North America

Key Market Statistics 1997

The North American IT Software & Services market is the largest Regional market in the World, see Exhibit 1.

Key Statistics are:

- Total IT Software & Services Market 1997 -$285 Billion.
- Internet/Intranet Services Market 1997 - $27 Billion
- Total IT User Expenditure $731 Billion
- GDP $8.5 Trillion

The North American region comprises the following countries:-

United States of America

Canada

Mexico

Exhibit 1

IT Software & Services Markets 1997

Key Indicators

- The North American IT Software & Services Market is estimated to represent 39% of all IT user expenditure.
- The Internet /Intranet Services proportion is expected to account for 9.5% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in North America in 1997 is estimated to be about $105 bn, almost entirely generated by EDI services, see Exhibit 2.

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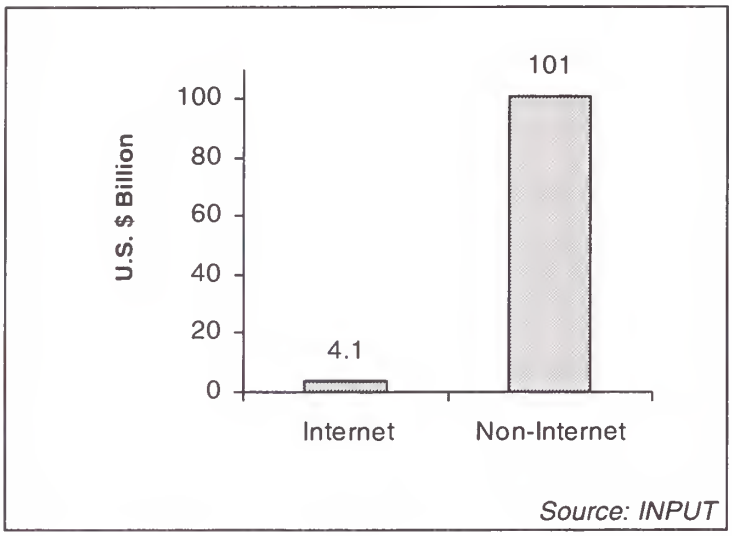
Exhibit 2

Value of Goods and Services Sold Electronically- North America 1997

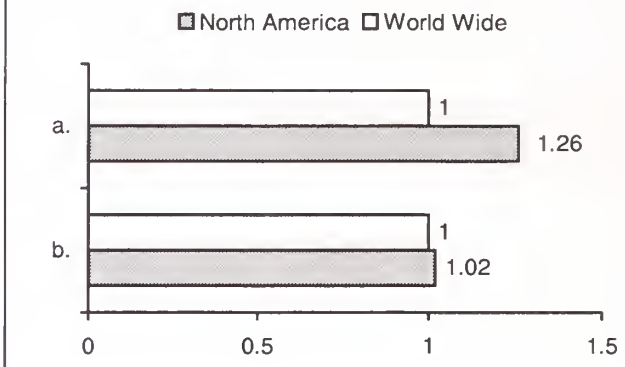


Source: INPUT

- Exhibit 3 shows comparative ratios for North America and World Wide markets which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1 for the world total.

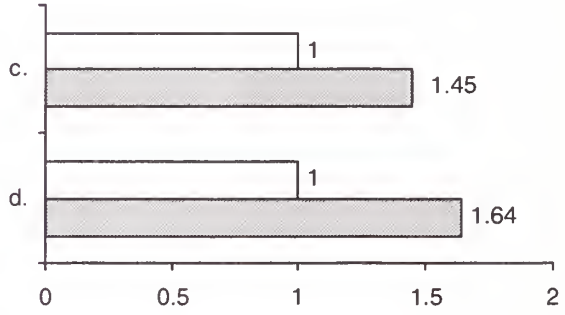
Exhibit 3

Comparative Ratios for Electronic Business



a. Average User Expenditures for IT as proportion of total revenues - (World 3.0%).

b. IT Software & Services as a proportion of all IT expenditure - (World - 37%).



c. Internet / Intranet services as a proportion of total IT Software & Services expenditure - (World - 6.5%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (World – 0.36%).

Source: INPUT

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Economic Context

The forecast for the North American IT Software & Services market is based on a fundamentally positive economic scenario despite the Far Eastern economic crisis.

The consensus forecast for GDP growth is now at around the 2.5% per annum level for the Region with inflation continuing at current levels or slightly lower as in the case of the US.

The OECD has reduced its US economic growth forecast by between 0.3 and 0.7% from that previously forecast for the next two years as a result of the Far Eastern problems.

For Canada the OECD sees scope still for robust non-inflationary growth falling gradually to below 3.5% per annum.

The OECD forecasts that the Mexican economy, which has been growing at almost 8% per annum, will fall back to a growth level of around 5.4% in 1988.

The positive scenario put forward here views the Far Eastern crisis as a timely intervention that brakes 'out of control' economic growth and consequent inflation that would otherwise have been addressed by a Federal Reserve interest rate hike.

However, the possibility exists for a far worse financial impact on the North American Region than that forecast here given that the global integration of the world economy is not yet fully understood.

As in previous economic crises the scope for wrong policy moves by the authorities is very real.

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and Internet / Intranet component are shown in Exhibit 4.

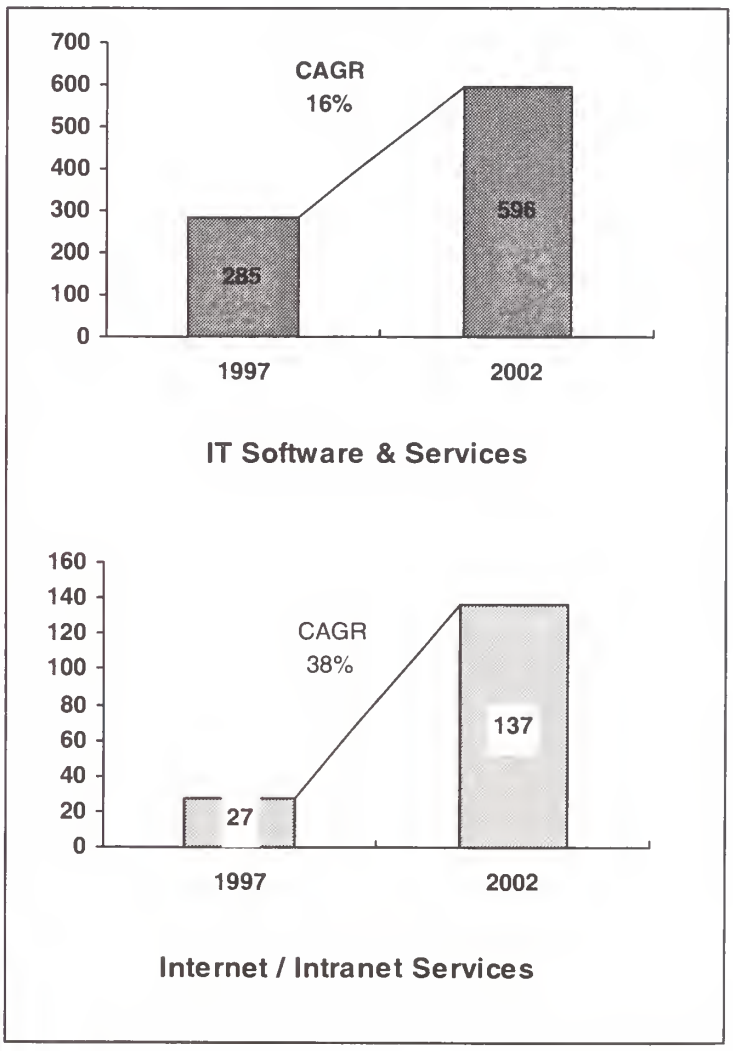
Forecasts for the nine principal categories of information services expenditure in the North American market are shown in Exhibit 5.

Exhibit 6 shows a comparison of growth rates for each service delivery mode.

Detailed forecasts of the components of each service category are provided in Exhibit 8.

Exhibit 4

IT Software & Services - North America 1997 - 2002



Source: INPUT

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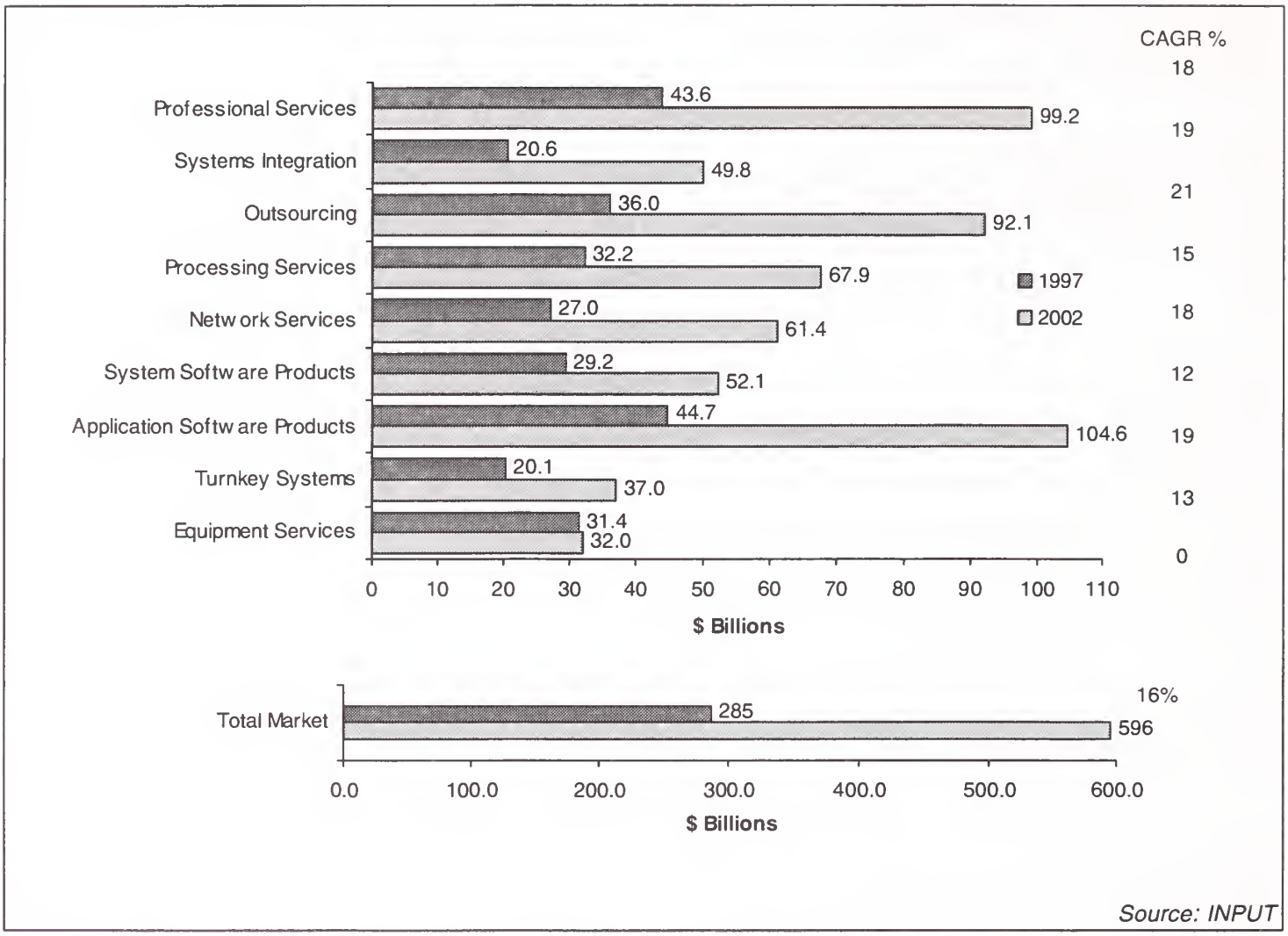
Exhibit 5

IT Software & Services Market Growth - North America 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Services Category

	North America	Worldwide
Outsourcing	21	20
Systems Integration	19	17
Systems Software Products	12	11
Network Services	18	17
Professional Services	18	12
Turnkey Systems	13	13
Processing Services	16	12
Application Software Products	19	15
Equipment Services	0	2

Source: INPUT

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User Expenditures for IT

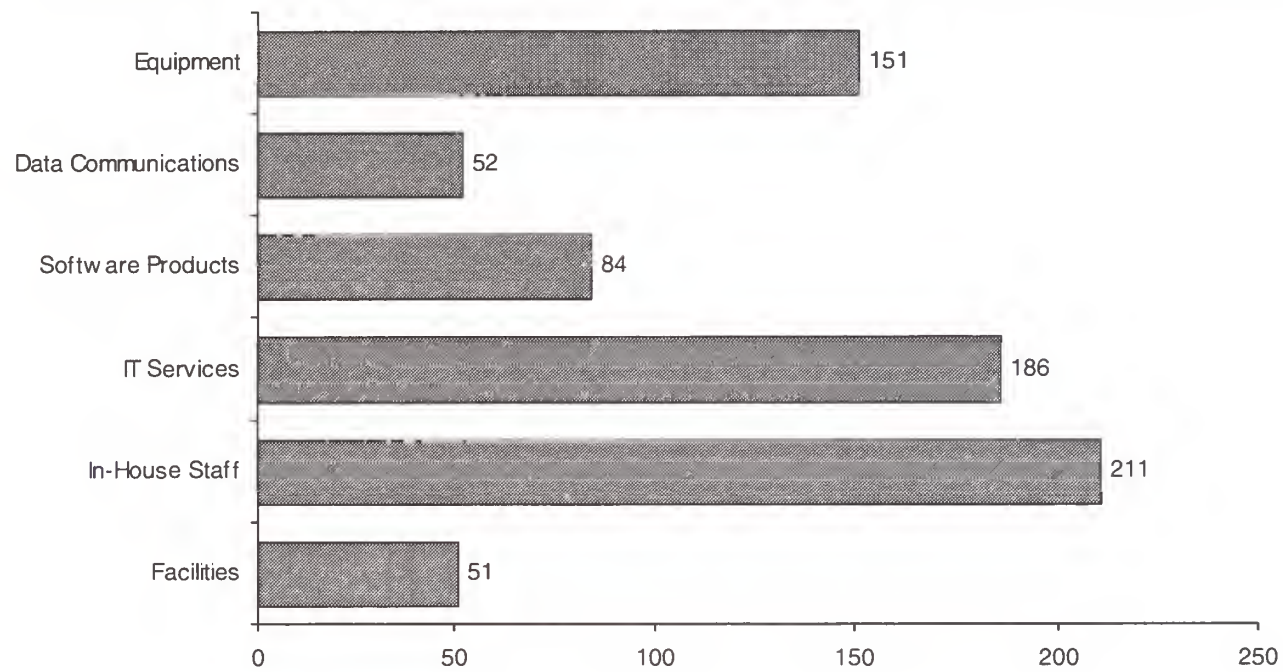
Exhibit 7 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 8 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 7

Total Information Technology Related Expenditures - North America 1997



Total IT Expenditure $735 Billion

Source: INPUT

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Exhibit 8

Software & Services Market
Forecast by Product/Services Category North America, 1997-2002

Delivery Modes	U.S. $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	36,836	18%	43,620	52,591	63,128	73,206	92,590	99,223	18%
Systems Integration	17,685	16%	20,561	24,094	28,585	34,199	41,135	49,771	19%
Outsourcing	29,928	18%	36,015	42,930	51,486	62,144	75,445	92,086	21%
Processing Services	29,287	10%	32,244	37,098	42,853	49,730	57,958	67,855	16%
Network Services	22,715	19%	27,036	31,430	36,846	43,350	51,401	61,394	18%
Application Software	38,020	18%	44,692	52,492	61,928	73,430	87,461	104,590	19%
System Software	25,999	12%	29,228	32,281	35,949	40,364	45,678	52,081	12%
Turnkey Systems	18,158	11%	20,119	22,642	25,510	28,834	32,667	37,043	13%
Equipment Services	31,460	0%	31,350	31,390	31,581	31,622	31,863	31,994	0%
Grand Total	250,088	14%	285,045	326,948	377,866	436,879	516,198	596,037	16%

Source: INPUT

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Latin America

Key Market Statistics 1997

Latin American IT Software & Services revenues account for 1.9% of the World market, see Exhibit 1.

Key Statistics are:

- Total IT Software & Services Market 1997 -$10.3 Billion.
- Internet/Intranet Services Market 1997 - $0.2 Billion
- Total IT User Expenditure $31.6 Billion
- GDP $1.4 Trillion

The Latin American region comprises the following:-

The two major country economies, Brazil and Argentina.

The smaller economies of Chile, Columbia and Venezuela; Mexico is included in North America.

The remaining countries of Central and Southern America, and the Caribbean.

Exhibit 1

IT Software & Services Markets 1997

Key Indicators

- The Latin American IT Software & Services Market is estimated to represent 33% of all IT user expenditure.
- The Internet /Intranet Services proportion is expected to account for 1.7% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in Latin America in 1997 is estimated to be about $5.3 bn,

see Exhibit 2.

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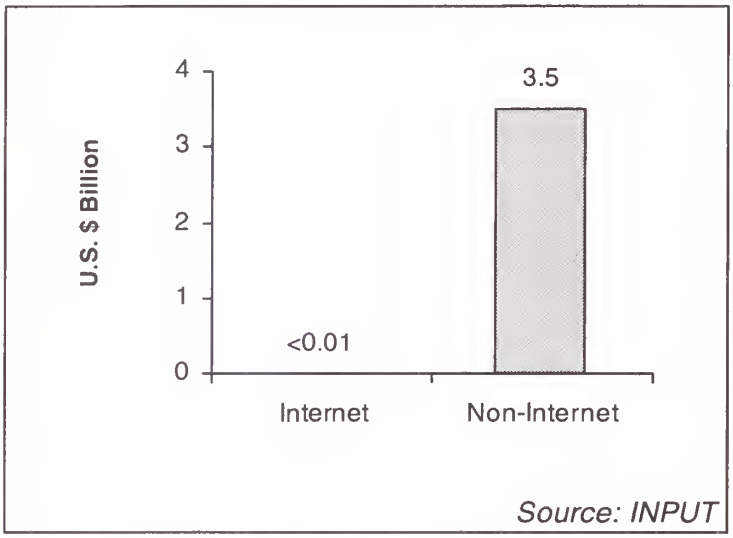
Exhibit 2

Value of Goods and Services Sold Electronically- Latin America 1997

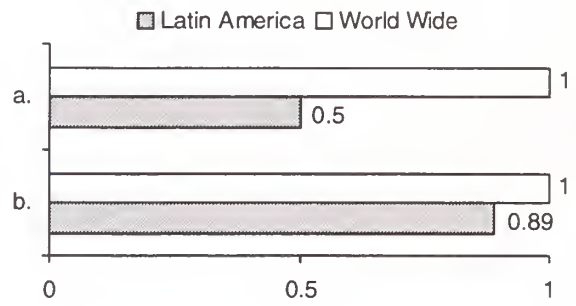


Source: INPUT

- Exhibit 3 shows comparative ratios for Latin America and World Wide markets which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for the World.

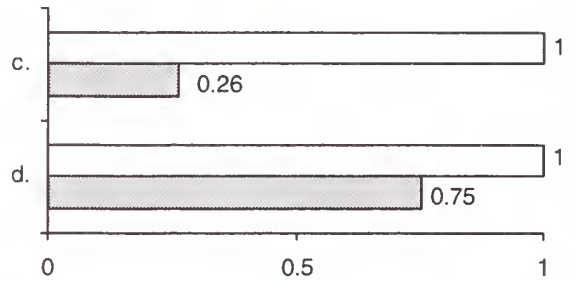
Exhibit 3

Comparative Ratios for Electronic Business



a. Average User Expenditures for IT as proportion of total revenues - (World 3.0%).

b. IT Software & Services as a proportion of all IT expenditure - (World - 37%).



c. Internet / Intranet services as a proportion of total IT Software & Services expenditure - (World- 6.5%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (World – 0.36%).

Source: INPUT

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Economic Context

The forecast for the IT Software & Services market in Latin America is based on a positive world economic scenario despite the risks emanating from the Far Eastern economic crisis.

The Region is however beset by many economic development problems.

The two dominant economies are Brazil and Argentina. GDP growth in Argentina remains strong, currently at about 8% per annum, far ahead of Brazil which has recently fallen to a rate of about 3% per annum.

However, both economies are continuing to experience significant problems, as is the whole Region, in adjusting to the demands of the modern integrated world economy. There is a great need for freer labor markets and for the continuing privatization of government owned businesses.

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet service component are shown in Exhibit 4.

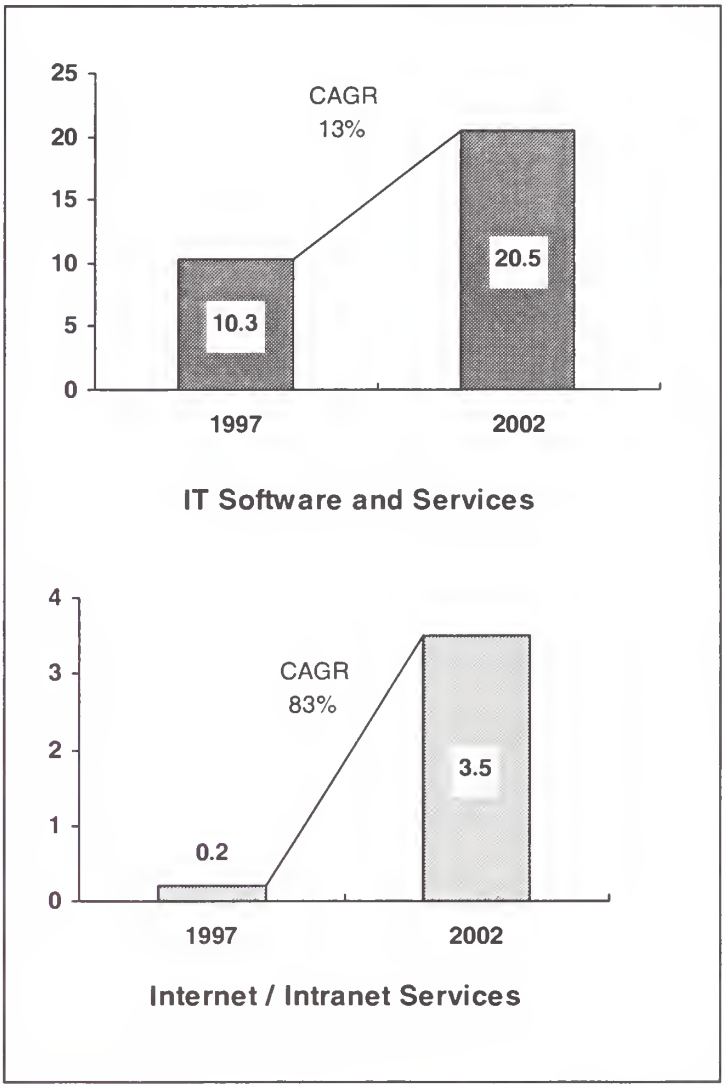
Forecasts for the nine principal categories of information services expenditure in the Latin American market are shown in Exhibit 5.

Exhibit 6 shows a comparison of growth rates for each service delivery mode.

Detailed forecasts of the components of each service category are provided in Exhibit 8.

Exhibit 4

IT Software & Services Latin America 1997 - 2002



Source: INPUT

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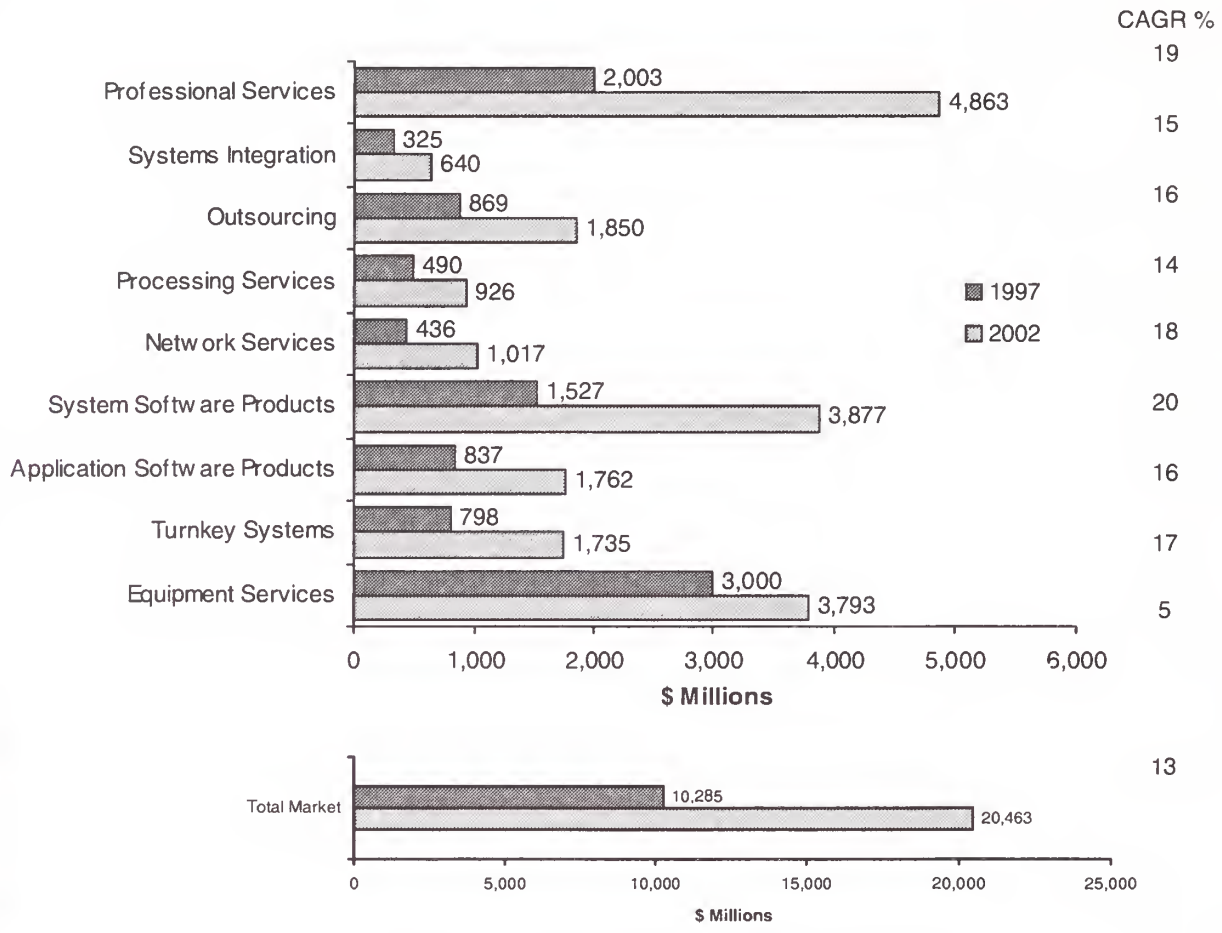
Exhibit 5

IT Software & Services Market Growth - Latin America 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Services Category

	Latin America	Worldwide
Outsourcing	16	20
Systems Integration	15	17
Systems Software Products	16	11
Network Services	18	17
Professional Services	19	12
Turnkey Systems	17	13
Processing Services	14	12
Application Software Products	20	15
Equipment Services	5	2

Source: INPUT

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User Expenditures for IT

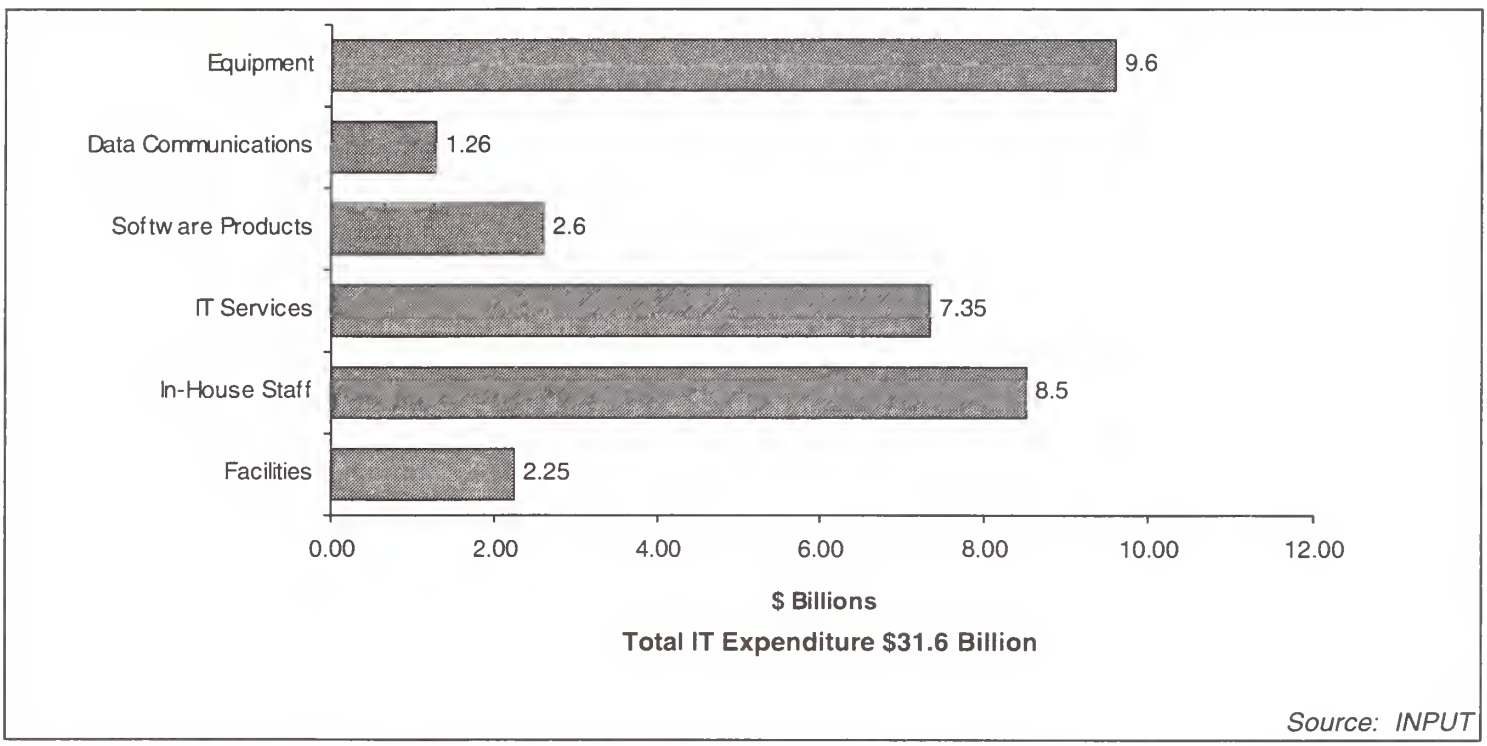
Exhibit 7 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 8 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 7

Total Information Technology Related Expenditures - Latin America 1997



Source: INPUT

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Exhibit 8

IT Software & Services Market
Forecast by Product/Services Category Latin America, 1997-2002

Delivery Modes	U.S. $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	1,696	18%	2,003	2,376	2,876	3,435	4,083	4,863	19%
Systems Integration	286	14%	325	373	427	490	560	640	15%
Outsourcing	753	15%	869	1,013	1,180	1,369	1,592	1,850	16%
Processing Services	439	12%	490	554	628	715	809	926	14%
Network Services	372	17%	436	516	611	725	863	1,017	18%
Application Software	1,281	19%	1,527	1,841	2,208	2,662	3,217	3,877	20%
System Software	727	15%	837	972	1,127	1,307	1,519	1,762	16%
Turnkey Systems	692	15%	798	927	1,084	1,263	1,475	1,735	17%
Equipment Services	2,863	5%	3,000	3,144	3,295	3,453	3,619	3,793	5%
Grand Total	9,108	13%	10,285	11,716	13,436	15,420	17,737	20,463	15%

Source: INPUT

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Europe

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Western Europe

Key Market Statistics 1997

The Western European IT Software & Services market represents 24% the World market, see Exhibit 1.

Key Statistics are:

- Total IT Software & Services Market 1997 -$134 Billion.
- Internet/Intranet Services Market 1997 - $7 Billion
- Total IT User Expenditure $365.4 Billion
- GDP $10.4 Trillion

The Western European region comprises the following:-

The four largest economies, Germany, France, Italy and the United Kingdom.

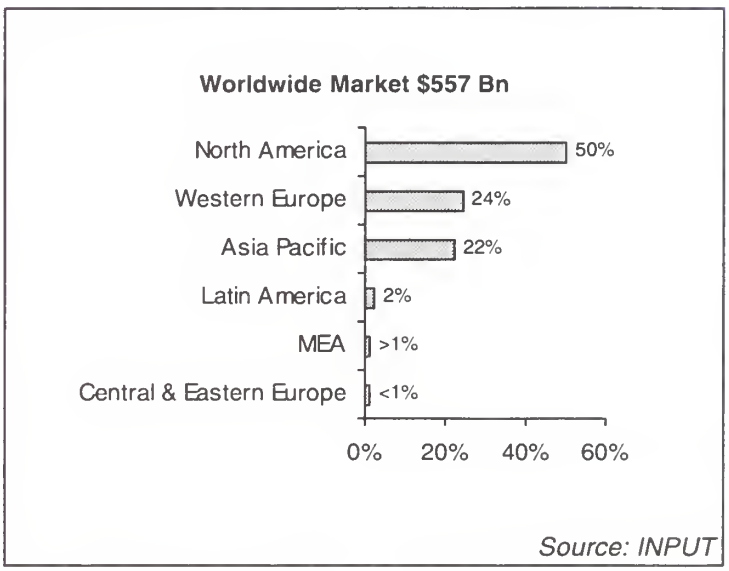
The Nordic countries, Sweden, Norway, Denmark and Finland.

The northern European countries, the Netherlands, Belgium and Luxembourg, Austria, Switzerland and Ireland.

The southern European countries, Spain, Portugal and Greece.

Exhibit 1

IT Software & Services Markets 1997



Source: INPUT

Key Indicators

- The Western Europe IT Software & Services Market is estimated to represent 36% of all IT user expenditure.
- The Internet / Intranet Services proportion is expected to account for 5.2% of all IT Software & Services expenditure in 1997.

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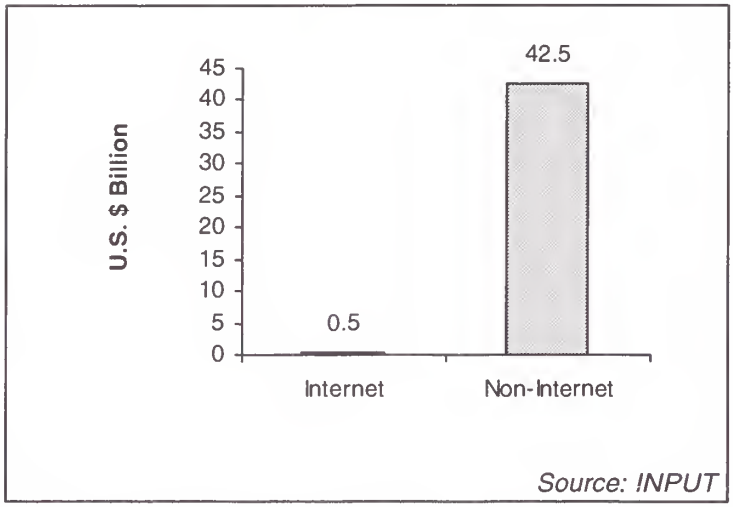
- The total value of goods and services sold electronically in Western Europe in 1997 is estimated to be about $43 bn, see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- Western Europe 1997

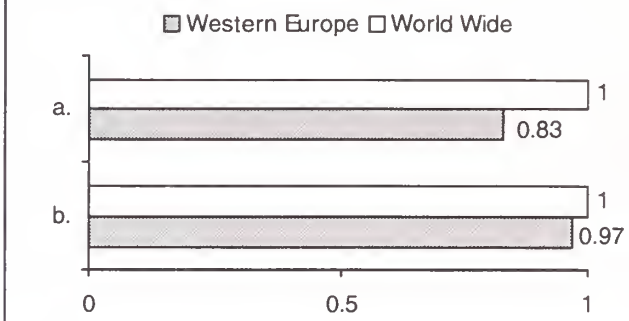


Source: INPUT

- Exhibit 3 shows comparative ratios for Western Europe and World Wide markets which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for the World.

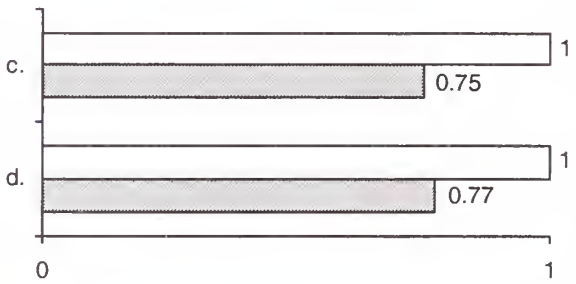
Exhibit 3

Comparative Ratios for Electronic Business



a. Average User Expenditures for IT as proportion of total revenues - (World 3.0%).

b. IT Software & Services as a proportion of all IT expenditure - (World - 37%).



c. Internet / Intranet services as a proportion of total IT Software & Services expenditure - (World- 6.5%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (World – 0.36%).

Source: INPUT

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Economic Context

The forecast for the IT Software & Services market in Western Europe is based on a fundamentally positive economic scenario despite the Far Eastern economic crisis.

GDP growth is now forecast at about 2.7% per annum for the Region (down by about 0.2% but still higher than that for the United States) with inflation continuing at current levels. Unemployment is not expected to rise higher than current levels in this scenario.

This forecast is however contingent upon continued economic recovery in Germany, where growth is forecast to reach 3% per annum.

The positive scenario put forward here views the Far Eastern crisis as a timely intervention that brakes out of control economic growth and consequent inflation that would otherwise have been addressed by central bank interest rate hikes.

However, the possibility exists for a far worse financial impact on the Western European Region than that forecast here given that the global integration of the world economy is not yet fully understood. A further factor is the imperative for the main European economies, with the exception of the UK, to meet the Maastricht criteria for admission to EMU.

As in previous economic crises the scope for wrong policy moves by the authorities is very real.

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and Internet / Intranet component are shown in Exhibit 4.

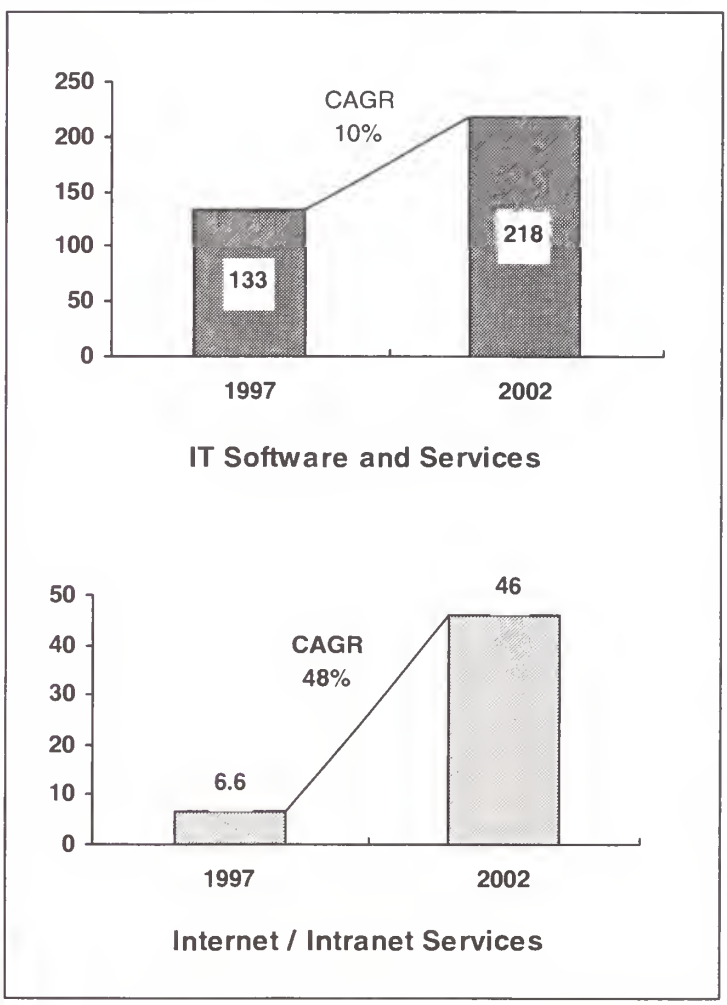
Forecasts for the nine principal categories of information services expenditure in the Western European market are shown in Exhibit 5.

Exhibit 6 shows a comparison of growth rates for each service delivery mode.

Detailed forecasts of the components of each service category are provided in Exhibit 8.

Exhibit 4

IT Software & Services Western Europe 1997 - 2002



Source: INPUT

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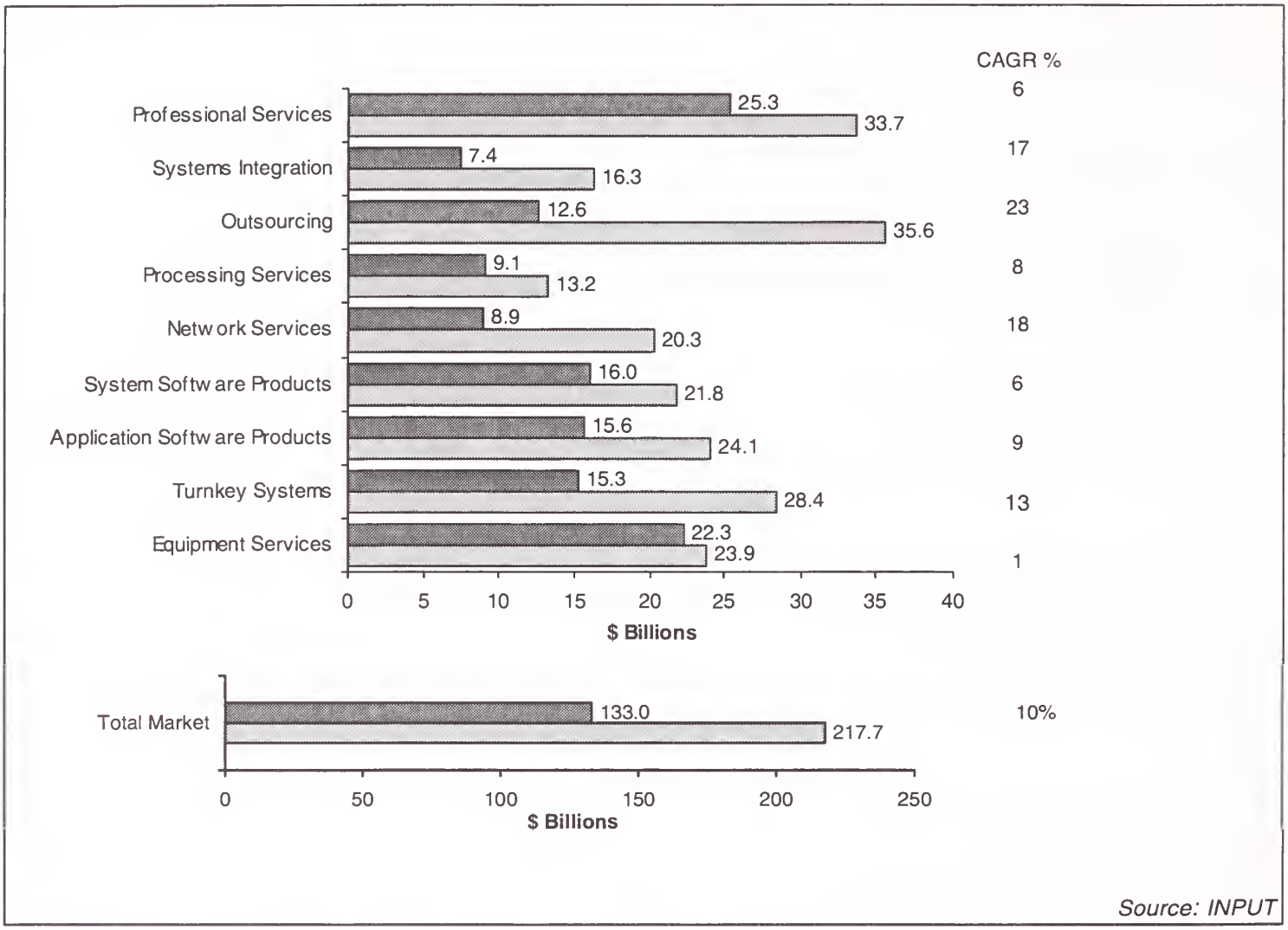
Exhibit 5

IT Software & Services Market Growth - Western Europe 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Service Category

	Western Europe	Worldwide
Outsourcing	23	20
Systems Integration	17	17
Systems Software Products	6	11
Network Services	18	17
Professional Services	6	12
Turnkey Systems	13	13
Processing Services	8	12
Application Software Products	9	15
Equipment Services	1	2

Source: INPUT

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User Expenditures for IT

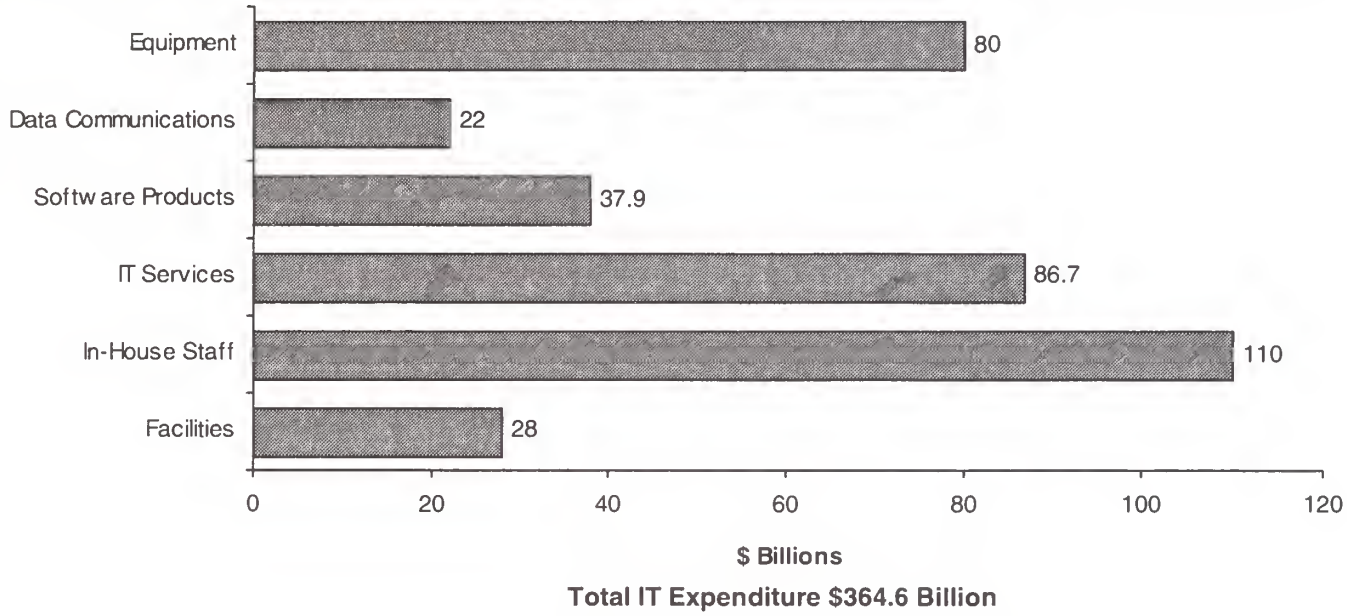
Exhibit 7 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 8 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 7

Total Information Technology Related Expenditures - Western Europe 1997



Source: INPUT

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Exhibit 8

IT Software & Services Market
Forecast by Product/Service Category Western Europe, 1997-2002

Delivery Modes	U.S. $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	24,097	5	25,312	26,779	28,359	30,070	31,800	33,658	6
- IS Consulting	4,305	11	4,763	5,341	5,988	6,744	7,518	8,390	12
- Education & Training	3,051	7	3,250	3,514	3,784	4,069	4,378	4,690	8
- Custom Software	16,721	3	17,179	17,944	18,487	19,277	19,804	20,478	4
Systems Integration	6,220	18	7,355	8,705	10,290	12,080	14,045	16,250	17
- Equipment	1,378	8	1,495	1,645	1,800	2,020	2,230	2,430	10
- Application Software	1,246	23	1,535	1,940	2,430	3,040	3,745	4,595	25
- System Software	448	16	520	615	720	845	980	1,135	17
- Professional Services	2,915	22	3,560	4,250	5,040	5,840	6,745	7,660	17
- Other	211	12	237	263	290	327	364	411	12
Outsourcing	9,678	30	12,575	16,524	20,669	25,044	30,085	35,608	23
- Platform Operations	1,840	21	2,227	2,654	3,030	3,417	3,782	4,156	13
- Application Operations	4,252	27	5,417	6,984	8,480	9,936	11,561	13,305	20
- Desktop Services	905	27	1,153	1,561	2,038	2,535	3,091	3,765	27
- Application Management	1,066	39	1,485	2,064	2,642	3,320	4,058	4,875	27
- Network Management	1,635	40	2,283	3,221	4,469	5,846	7,583	9,497	33
Processing Services	8,543	7	9,136	9,785	10,613	11,465	12,286	13,231	8
- Transaction Processing	7,166	6	7,625	8,121	8,776	9,447	10,076	10,781	7
- Utility Processing	275	-1	272	288	294	299	315	329	4
- Other Processing	1,092	14	1,240	1,387	1,543	1,710	1,906	2,131	11
Network Services	7,587	17	8,884	10,498	12,413	14,681	17,272	20,339	18
- Electronic Info Servoces	4,716	14	5,362	6,157	7,070	8,168	9,405	10,855	15
- Network Applications	2,871	23	3,523	4,351	5,333	6,503	7,868	9,475	22
System Software	14,849	7	15,960	17,191	18,222	19,419	20,539	21,785	6
- Mainframe	5,641	0	5,652	5,712	5,781	5,899	5,977	6,063	1
- Minicomputer	4,692	7	5,030	5,387	5,782	6,184	6,564	7,001	7
- Workstation/PC	4,486	18	5,298	5,992	6,629	7,326	8,038	8,781	11
Application Software	13,885	12	15,616	17,474	19,172	20,817	22,449	24,124	9
- Mainframe	886	-3	855	845	814	803	793	772	-2
- Minicomputer	3,654	7	3,913	4,209	4,514	4,847	5,157	5,504	7
- Workstation/PC	9,315	17	10,908	12,650	13,774	15,137	16,439	17,898	10
Turnkey Systems	14,052	9	15,334	17,314	19,630	22,333	25,145	28,423	13
- Equipment	6,532	6	6,952	7,641	8,438	9,264	10,198	11,340	10
- Application Software	3,013	13	3,390	3,938	4,605	5,451	6,288	7,194	16
- System Software	778	13	878	987	1,106	1,235	1,364	1,494	11
- Professional Services	3,739	10	4,104	4,738	5,491	6,393	7,315	8,395	15
Equipment Services	22,290	0	22,295	22,560	22,870	23,165	23,560	23,900	1
- Equipment Maintenance	12,616	-5	11,988	11,474	11,083	10,553	10,121	9,454	-5
- Environmental Services	9,585	8	10,308	10,986	11,799	12,620	13,429	14,338	7
Grand Total	121,870	9	132,985	147,120	163,110	178,425	196,840	217,660	10

Source: INPUT

This Regional Profile is issued as part of INPUT's World-Wide IT Software & Services Market Forecast Program. If you have questions or comments on this profile, please call your local INPUT organisation or Peter Lines at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, Tel: 650 961 3300 email: plines@input.com

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Market Profile

A Publication from INPUT's Worldwide Market Forecast Program

Central & Eastern Europe

Key Market Statistics 1997

The Central & Eastern European IT Software & Services market represents 0.6% of the World market, see Exhibit 1.

Key Statistics are:

- Total IT Software & Services Market 1997 -$3.2 Billion.
- Internet/Intranet Services Market 1997 - $64 million
- Total IT User Expenditure $13.8 Billion
- GDP $726 Billion

The Central & Eastern European region comprises the following countries:-

Russia, Belarus, the Ukraine, and Moldova

The Central European countries Hungary, Poland, the Czech Republic, and Slovakia

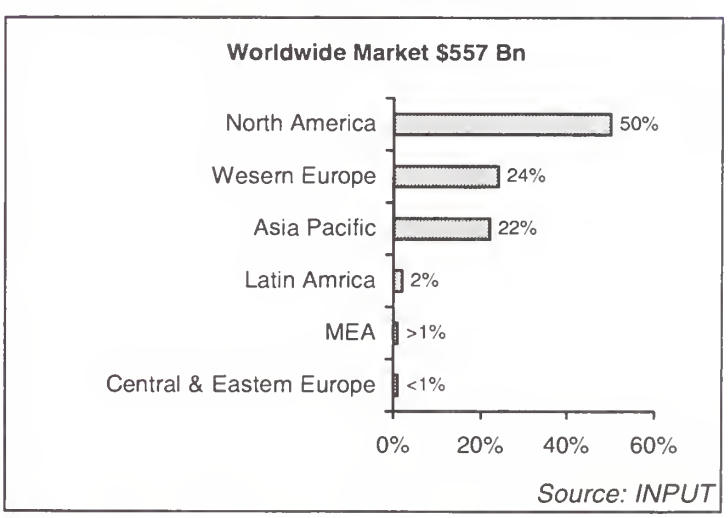
The less economically developed central European and Balkan States, Yugoslavia (Serbia and Montenegro), Bosnia-Herzegovina, Croatia, Slovenia, Macedonia, Albania, Bulgaria, and Romania.

The Baltic countries, Estonia, Latvia and Lithuania

All other former parts of the Soviet block are defined to fall within the Middle East / Africa or the Asia Pacific Regions

Exhibit 1

IT Software & Services Markets 1997



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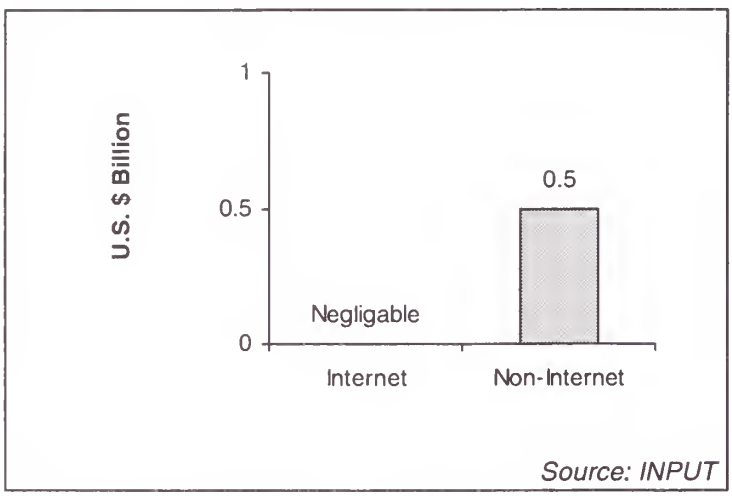
Key Indicators

- The Central & Eastern Europe IT Software & Services Market is estimated to represent 24% of all IT User expenditure.
- The Internet /Intranet Services proportion is expected to account for 2% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in Eastern Europe in 1997 is estimated to be about $0.5 bn (see Exhibit 2).

Exhibit 2

Value of Goods and Services Sold Electronically- Eastern Europe 1997

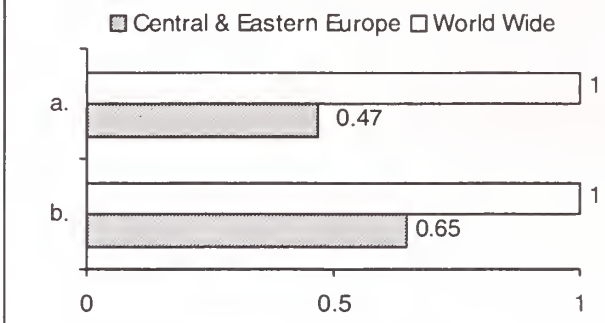


Source: INPUT

- Exhibit 3 shows comparative ratios for Central & Eastern Europe and World Wide markets which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for the World.

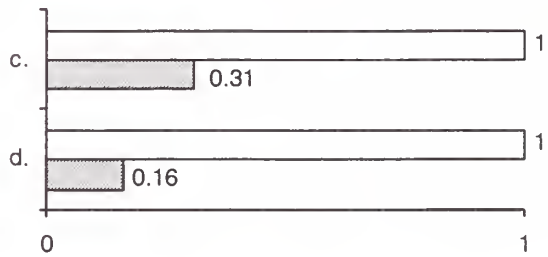
Exhibit 3

Comparative Ratios for Electronic Business



a. Average User Expenditures for IT as proportion of total revenues - (World 3.0%).

b. IT Software & Services as a proportion of all IT expenditure - (World - 37%).



c. Internet / Intranet services as a proportion of total IT Software & Services expenditure - (World- 6.5%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (World – 0.36%).

Source: INPUT

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Economic Context

The forecast for the IT Software & Services market in Central & Eastern Europe is based on a positive world economic scenario despite the risks emanating from the Far Eastern economic crisis.

Assuming that the far Eastern crisis does not spread to become a world contagion the prospects for this Region now look positive.

Russia's economy is predicted to be about to complete its first full year of growth since the end of the Soviet Union. Growth is expected to go from the 1% achieved in 1997 to 3% in 1998 based on an expanding export trade.

The OECD and other economic forecasters are predicting improved growth for Hungary, 3.5% in 1998 compared to 2.5% in 1997. Similarly economic commentators see the strong possibility of an economic revival in the Czech Republic which has only registered GDP growth at about the 1% level in 1997.

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet services component are shown in Exhibit 4.

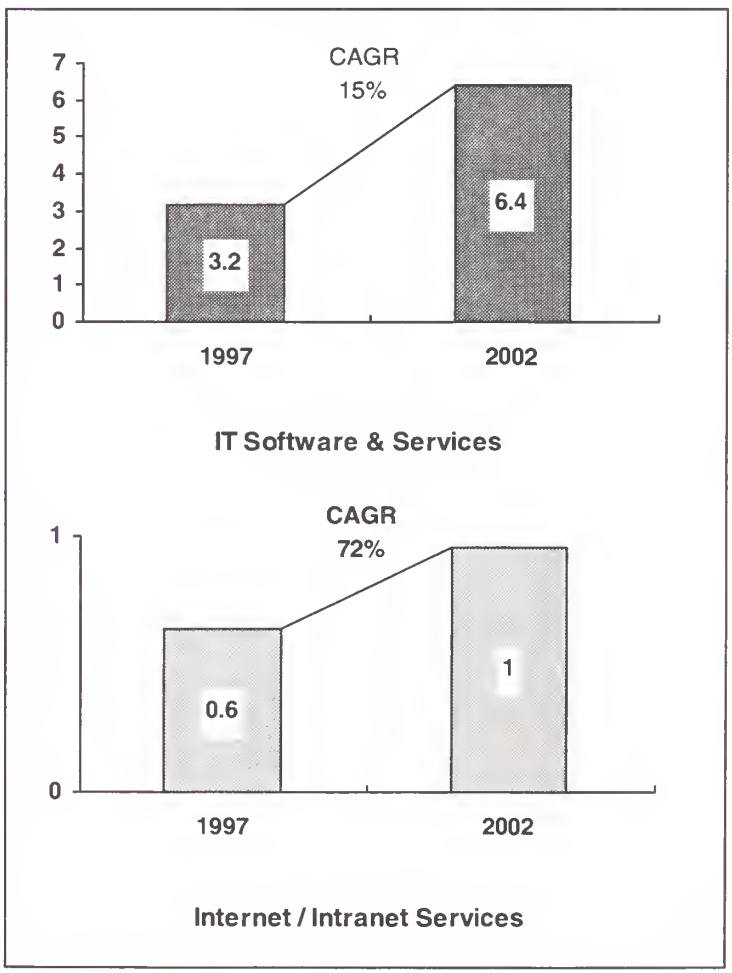
Forecasts for the nine principal categories of information services expenditure in the Central & Eastern Europe market are shown in Exhibit 5.

Exhibit 6 shows a comparison of regional growth rates for each service delivery mode with those for the World.

Detailed forecasts of the components of each service category are provided in Exhibit 8.

Exhibit 4

IT Software & Services Central & Eastern Europe 1997 - 2002



Source: INPUT

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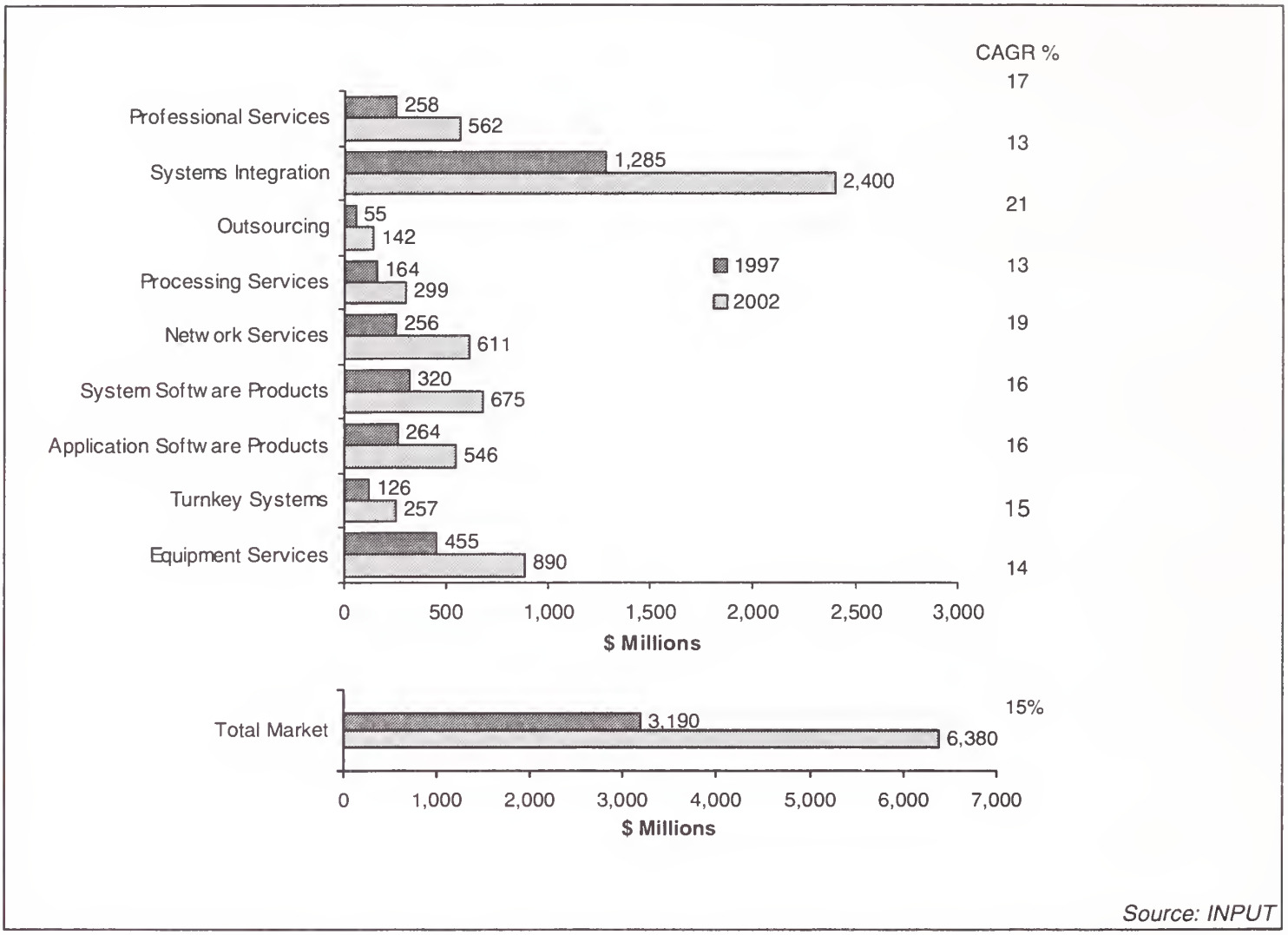
Exhibit 5

IT Software & Services Market Growth - Central & Eastern Europe 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Service Category

	Central & Eastern Europe	Worldwide
Outsourcing	21	20
Systems Integration	13	17
Systems Software Products	16	11
Network Services	19	17
Professional Services	17	12
Turnkey Systems	15	13
Processing Services	13	12
Application Software Products	16	15
Equipment Services	14	2

Source: INPUT

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User Expenditures for IT

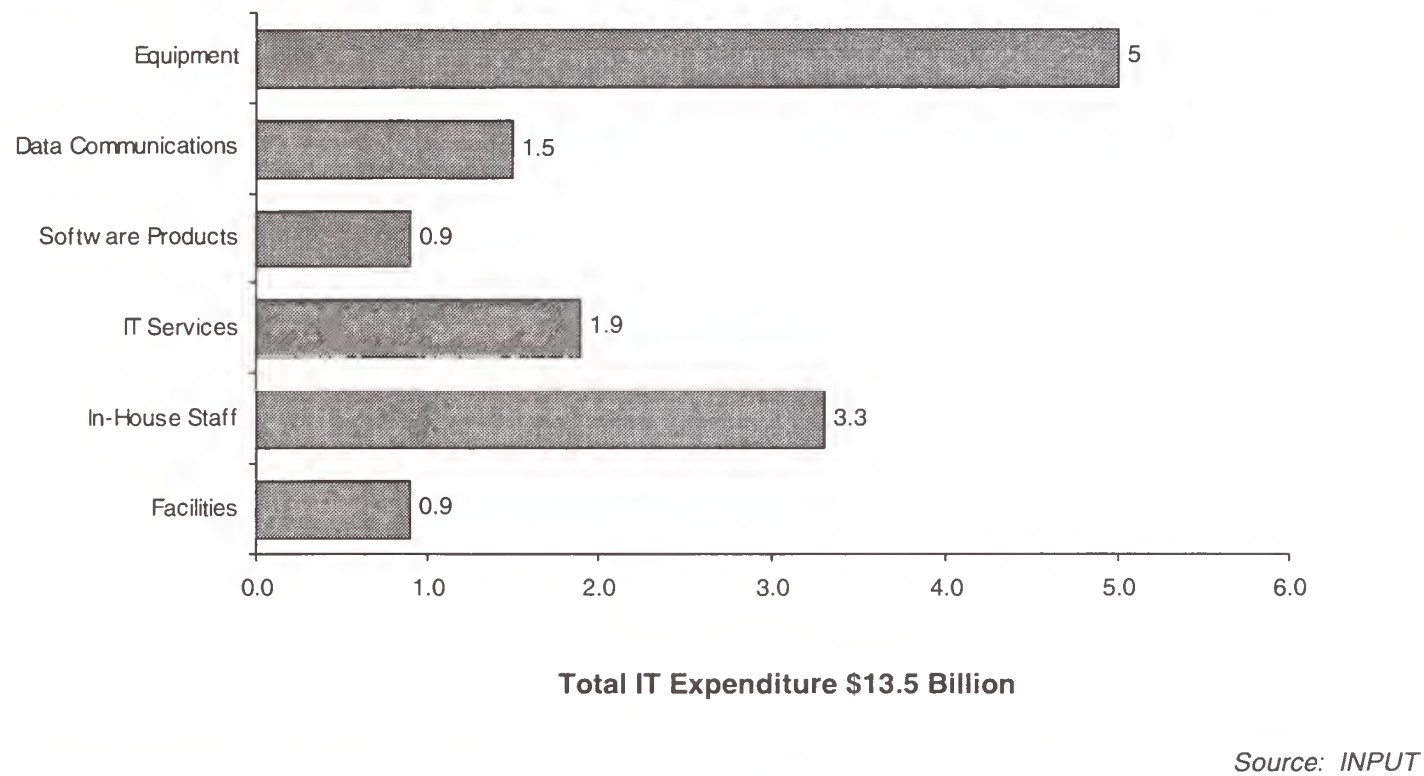
Exhibit 7 provides an assessment of all user expenditures on IT including internal staff and facilities.

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 8 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 7

Total Information Technology Related Expenditures - Central & Eastern Europe 1997



Source: INPUT

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Exhibit 8

IT Software & Services Market
Forecast by Product/Service Category Central & Eastern Europe, 1997-2002

Delivery Modes	U.S. $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	223	16	258	301	351	410	480	562	17
- IS Consulting	5	40	7	9	12	16	22	30	34
- Education & Training	129	16	150	176	206	241	282	330	17
- Custom Software	89	13	101	116	133	153	176	202	15
Systems Integration	1,120	15	1,285	1,455	1,640	1,860	2,105	2,400	13
- Equipment	312	7	335	355	370	390	410	430	5
- Application Software	154	20	185	220	260	310	365	435	19
- System Software	62	13	70	75	80	85	90	95	6
- Professional Services	505	19	600	710	830	970	1,135	1,330	17
- Other	89	4	93	97	100	103	106	109	3
Outsourcing	42	31	55	66	81	96	115	142	21
- Platform Operations	10	30	13	16	20	23	28	34	21
- Application Operations	18	28	23	26	30	34	39	45	14
- Desktop Services	5	40	7	9	12	15	19	25	29
- Application Management	4	125	5	6	8	10	12	15	0
- Network Management	5	40	7	9	11	14	17	23	27
Processing Services	147	12	164	185	207	235	264	299	13
- Transaction Processing	74	15	85	99	114	133	154	179	16
- Utility Processing	45	7	48	52	56	61	65	71	8
- Other Processing	28	9	31	34	37	41	45	49	10
Network Services	213	20	256	302	357	429	508	611	19
- Electronic Info Services	84	17	99	113	130	152	175	205	16
- Network Applications	129	22	158	189	227	277	333	406	21
System Software	271	18	320	369	428	501	581	675	16
- Mainframe	99	9	108	118	129	141	153	167	9
- Minicomputer	78	15	90	103	118	136	156	179	15
- Workstation/PC	94	30	122	148	181	224	272	329	22
Application Software	215	23	264	316	368	423	481	546	16
- Mainframe	34	3	35	35	36	37	37	38	2
- Minicomputer	76	14	87	101	116	133	153	176	15
- Workstation/PC	105	35	142	180	216	253	291	332	19
Turnkey Systems	108	17	126	146	170	197	225	257	15
- Equipment	58	17	68	79	92	106	122	140	16
- Application Software	17	18	20	22	25	29	32	36	12
- System Software	2	0	2	3	4	5	6	6	25
- Professional Services	31	16	36	42	49	57	65	75	16
Equipment Services	410	11	455	510	580	665	770	890	14
- Equipment Maintenance	314	9	342	376	417	467	519	566	11
- Environmental Services	95	18	112	134	161	200	251	322	24
Grand Total	2,750	16	3,190	3,650	4,180	4,820	5,530	6,380	15

Source: INPUT

This Regional Profile is issued as part of INPUT's World-Wide IT Software & Services Market Forecast Program. If you have questions or comments on this profile, please call your local INPUT organisation or Peter Lines at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, Tel: 650 961 3300 email: plines@input.com

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Asia/Pacific

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Market Profile

A Publication from INPUT's Worldwide Market Forecast Program

Asia Pacific

Key Market Statistics 1997

The Asia Pacific IT Software & Services market is the third largest Regional Market in the World, see Exhibit 1.

Key Statistics are:

- Total IT Software & Services Market 1997 -$120 Billion.
- Internet/Intranet Services Market 1997 - $2.7 Billion
- Total IT User Expenditure $318 Billion
- GDP $8.7 Trillion

The Asia Pacific Region comprises the following:-

The major economies of Japan, Australia and New Zealand, China, India, South Korea, Hong Kong, Taiwan and Singapore.

The economies of Indonesia, Malaysia, the Philippines and Thailand.

All other Asian and Pacific Island countries including the ex-Soviet republics of Kazahkstan, Kirgizstan, Tajikstan, Turkmenistan and Uzbekistan.

Exhibit 1

IT Software & Services Markets 1997

Key Indicators

- The Asia Pacific IT Software & Services Market is estimated to represent 38% of all IT user expenditure.
- The Internet/Intranet Services proportion is expected to account for 2.2% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in Asia Pacific in 1997 is estimated to be about $25.5 bn,

see Exhibit 2.

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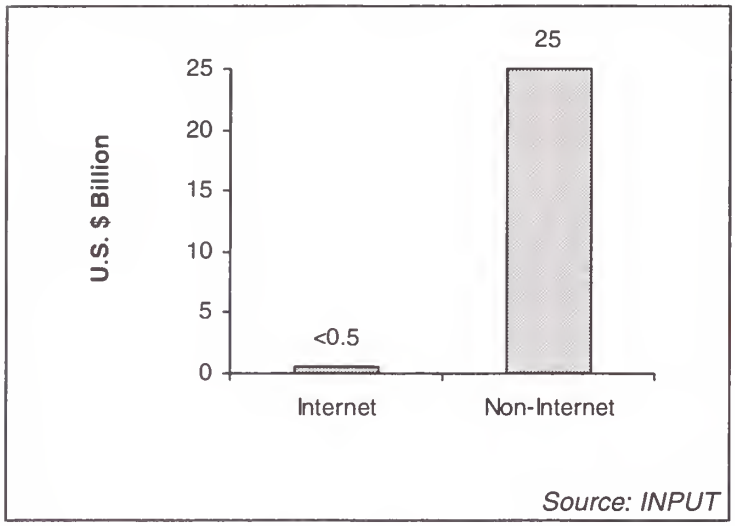
Exhibit 2

Value of Goods and Services Sold Electronically- Asia Pacific 1997

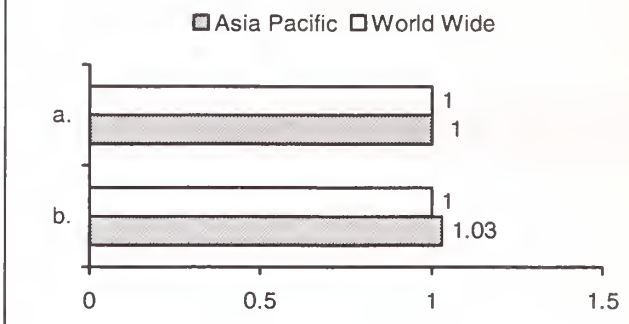


Source: INPUT

- Exhibit 3 shows comparative ratios for Asia Pacific and World Wide markets which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for the World.

Exhibit 3

Comparative Ratios for Electronic Business



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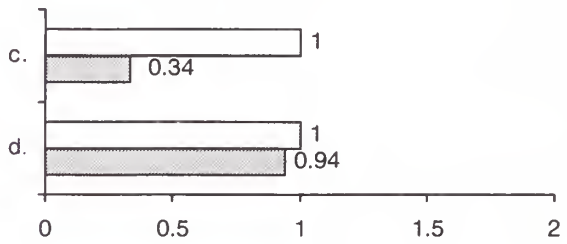
b. IT Software & Services as a proportion of all IT expenditure - (World - 37%).



c. Internet / Intranet services as a proportion of total IT Software & Services expenditure - (World- 6.5%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (World – 0.36%).

Source: INPUT

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Economic Context

The forecast for the Asian Pacific regional IT Software & Services market is based on a positive economic scenario despite the financial chaos and lack of confidence currently being experienced in the Region.

In this scenario rapid growth, as previously experienced, is forecast to return within two to three years time.

GDP growth for Japan, the dominant economy in the Region and the second largest country economy in the World, is now downgraded to around 1.7% per annum (down by about 0.6%) a level which some economists still think is unlikely to be reached.

The South Korean economy is likely to see growth drop to around 3% per annum from the pre-crisis 5% level. For other important Asian countries growth expectations are; Thailand - zero in 1988, Indonesia 2% and Malaysia 2.5%.

Japan's economy is not only grappling with internal instabilities caused by over investment but with its heavy dependence on trade and financial investment with economically distressed Asian economies.

As in previous economic crises the scope for wrong policy moves by the authorities is very real, in particular there is little global confidence in the capabilities of the Japanese authorities to deal with their financial crisis which has now been running since 1990.

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet services component are shown in Exhibit 4.

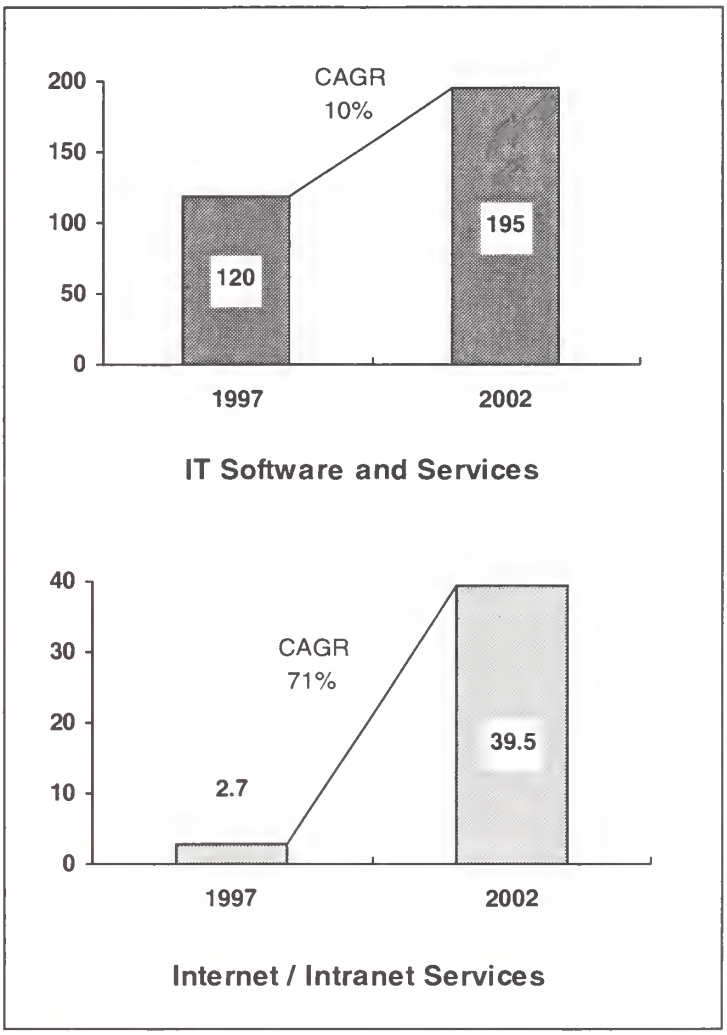
Forecasts for the nine principal categories of information services expenditure in the Asia Pacific market are shown in Exhibit 5.

Exhibit 6 shows a comparison of growth rates for each service delivery mode.

Detailed forecasts of the components of each service category are provided in Exhibit 8.

Exhibit 4

IT Software & Services Growth Asia Pacific 1997 - 2002



Source: INPUT

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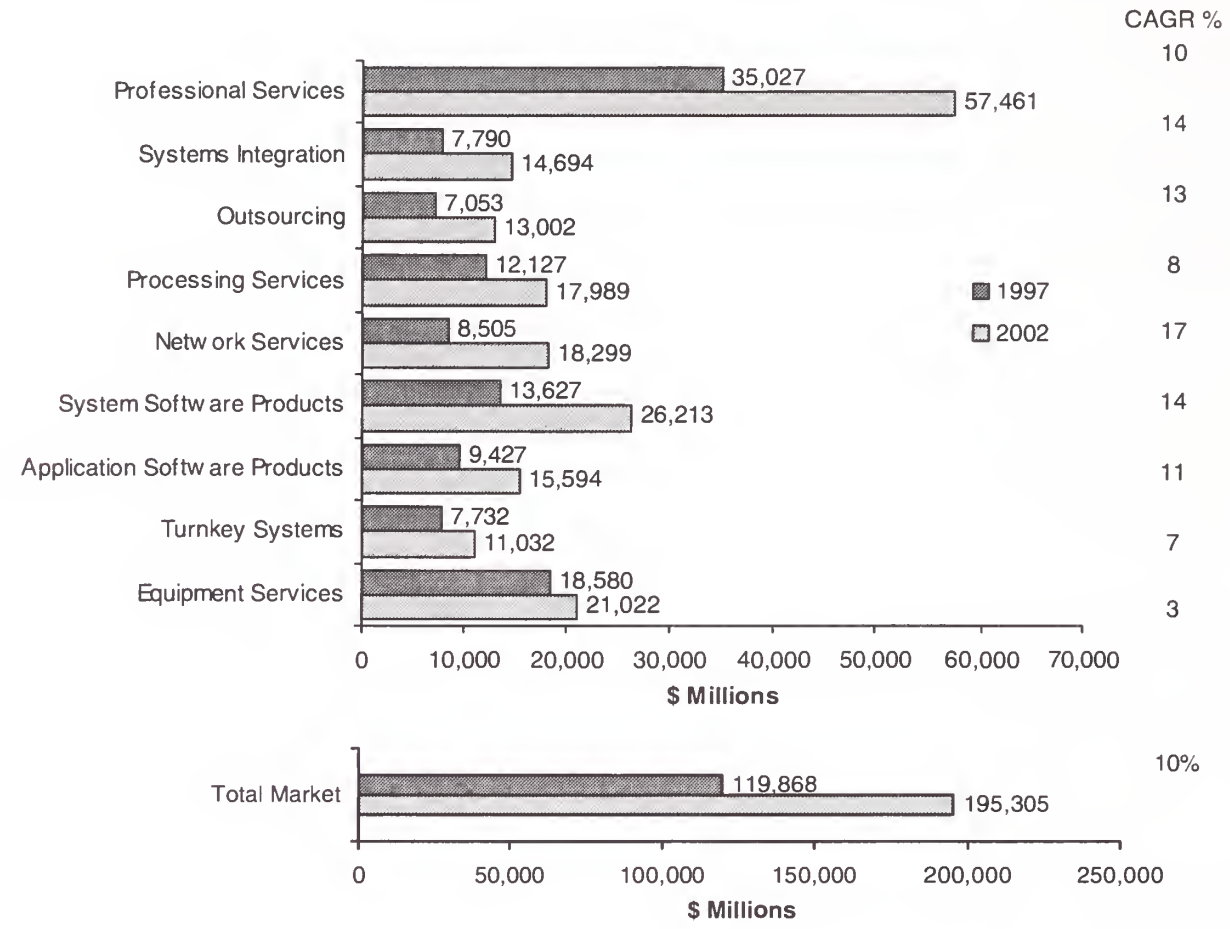
Exhibit 5

IT Software & Services Market Growth - Asia Pacific 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Service Category

	Asia Pacific	Worldwide
Outsourcing	13	20
Systems Integration	14	17
Systems Software Products	11	11
Network Services	17	17
Professional Services	10	12
Turnkey Systems	7	13
Processing Services	8	12
Application Software Products	14	15
Equipment Services	3	2

Source: INPUT

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User Expenditures for IT

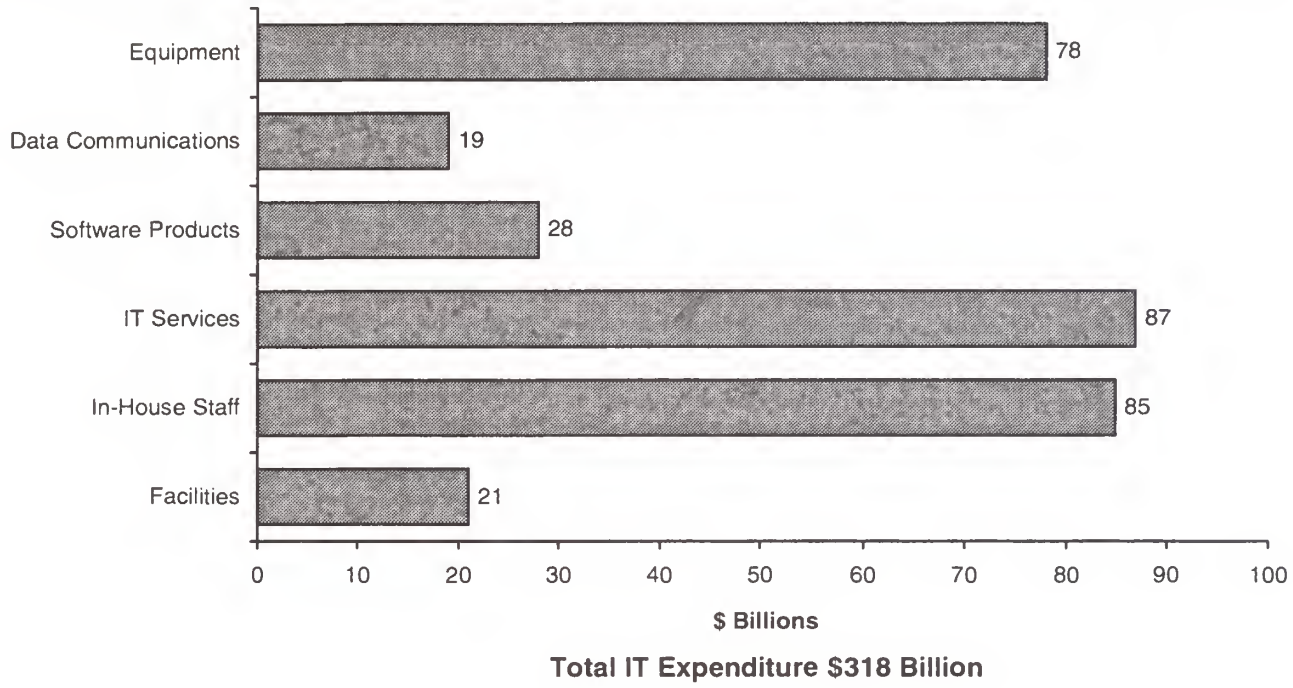
Exhibit 7 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 8 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 7

Total Information Technology Related Expenditures - Asia Pacific 1997



Total IT Expenditure $318 Billion

Source: INPUT

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Exhibit 8

IT Software & Services Market
Forecast by Product/Service Category Asia Pacific, 1997-2002

Delivery Modes	U.S. $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	32,053	9%	35,027	38,430	42,298	46,686	51,658	57,461	10%
Systems Integration	7,155	9%	7,790	8,773	9,947	11,323	12,886	14,694	14%
Outsourcing	6,295	12%	7,053	7,934	8,938	10,103	11,447	13,002	13%
Processing Services	11,088	9%	12,127	13,002	14,075	15,261	16,566	17,989	8%
Network Services	7,471	14%	8,505	9,864	11,459	13,347	15,603	18,299	17%
Application Software	12,042	13%	13,627	15,362	17,404	19,831	22,729	26,213	14%
System Software	8,586	10%	9,427	10,368	11,434	12,625	14,005	15,594	11%
Turnkey Systems	7,115	9%	7,732	8,251	8,828	9,454	10,185	11,032	7%
Equipment Services	18,127	3%	18,580	19,045	19,521	20,009	20,509	21,022	3%
Grand Total	109,931	9%	119,868	131,029	143,905	158,638	175,588	195,305	10%

Source: INPUT

This Regional Profile is issued as part of INPUT's World-Wide IT Software & Services Market Forecast Program. If you have questions or comments on this profile, please call your local INPUT organisation or Peter Lines at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, Tel: 650 961 3300 email: plines@input.com

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Market Profile

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Middle East / Africa

Key Market Statistics 1997

The Middle East / Africa IT Software & Services market represents 1.2% of the World market, see Exhibit 1.

Key Statistics are:

- Total IT Software & Services Market 1997 -$6.55 Billion.
- Internet/Intranet Services Market 1997 - $0.04 Billion
- Total IT User Expenditure $20 Billion
- GDP $1,117 Billion

The Middle East comprises the following:-

The major economies of Turkey, Israel and Saudi Arabia.

Kuwait, United Arab Emirates, Bahrain and Cyprus.

Iran, Iraq, Jordan, the Lebanon, Oman and Syria.

All other Middle Eastern countries including the ex-Soviet republics of Armenia, Azerbaijan, and Georgia.

In Africa:-

South Africa.

Algeria, Egypt, Kenya, Morocco, and Tunisia.

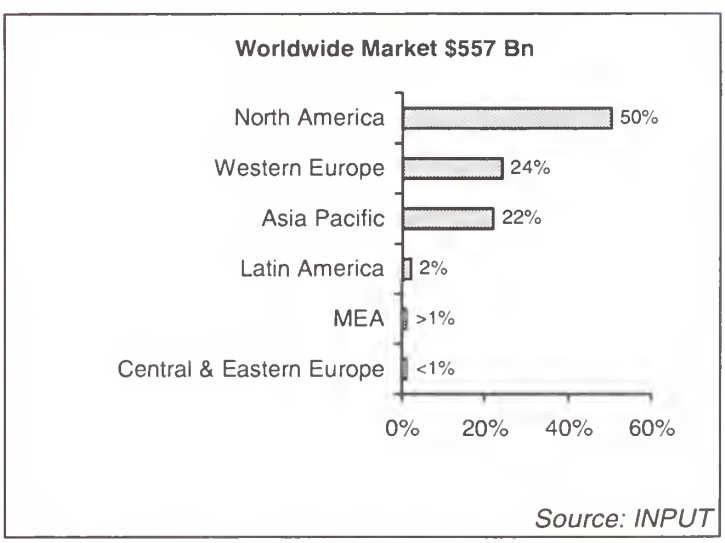
Nigeria, Uganda, Zimbabwe and Libya.

Cote d' Ivoire, Ethiopia, Ghana, the Sudan and Tanzania.

All other countries on the Continent of Africa.

Exhibit 1

IT Software & Services Markets 1997



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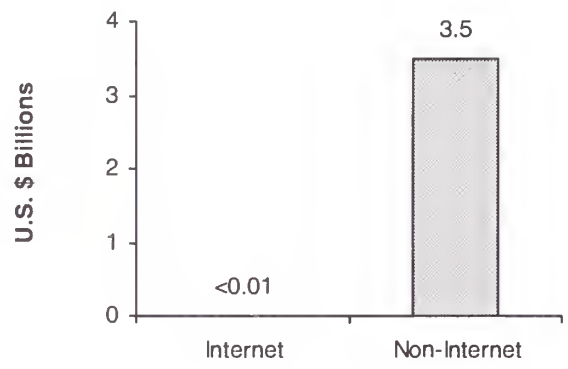
Key Indicators

- The Middle East / Africa IT Software & Services Market is estimated to represent 32% of all IT user expenditure.
- The Internet /Intranet Services proportion is expected to account for 0.6% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in the Middle East / Africa in 1997 is estimated to be about $3.5 bn (see Exhibit 2).

Exhibit 2

Value of Goods and Services Sold Electronically- Middle East / Africa 1997

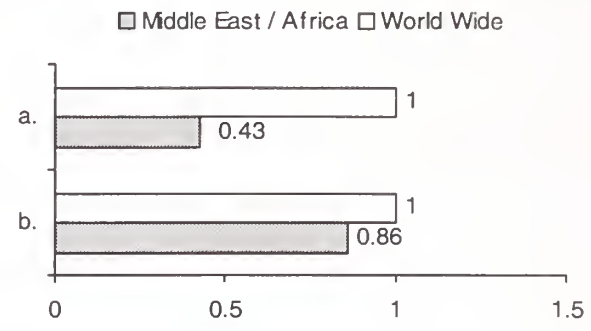


Source: INPUT

- Exhibit 3 shows comparative ratios for Middle East / Africa and World Wide markets which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for the World.

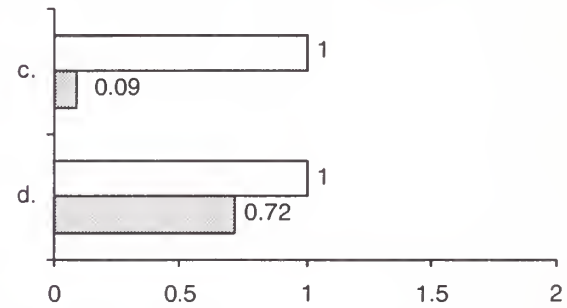
Exhibit 3

Comparative Ratios for Electronic Business



a. Average User Expenditures for IT as proportion of total revenues - (World 3.0%).

b. IT Software & Services as a proportion of all IT expenditure - (World - 37%).



c. Internet / Intranet services as a proportion of total IT Software & Services expenditure - (World- 6.5%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (World – 0.36%).

Source: INPUT

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Economic Context

The forecast for the Middle East / Africa Region IT Software & Services market is based on a positive economic scenario for the World despite the risks emanating from the Far Eastern economic crisis.

GDP growth for the Region is fundamentally a function of the performance of the leading regional economies; Turkey, Israel and Saudi Arabia in the Middle East and South Africa, Algeria and Egypt in Africa.

The GDP growth estimate for Turkey is currently at about 5% per annum, Israel 2% per annum and South Africa 1.5% per annum.

The possibility exists for a far worse financial impact on the Middle East / Africa Region than that forecast here given that the global integration of the world economy is not yet fully understood.

As in previous economic crises there is scope for wrong policy moves by the authorities in the advanced economies that would have a negative impact on the Region.

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and Internet / Intranet component are shown in Exhibit 4.

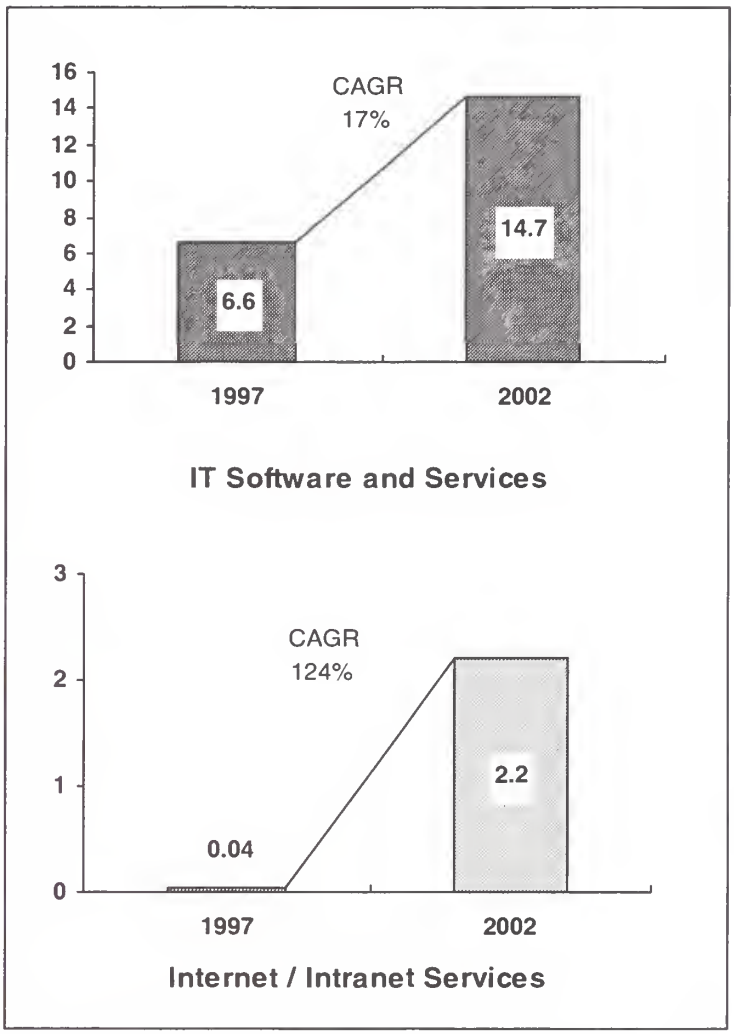
Forecasts for the nine principal categories of information services expenditure in the Middle East / Africa market are shown in Exhibit 5.

Detailed forecasts of the components of each service category are provided in Exhibit 8.

Exhibit 6 shows a comparison of growth rates for each service delivery mode.

Exhibit 4

IT Software & Services Middle East / Africa 1997 - 2002



Source: INPUT

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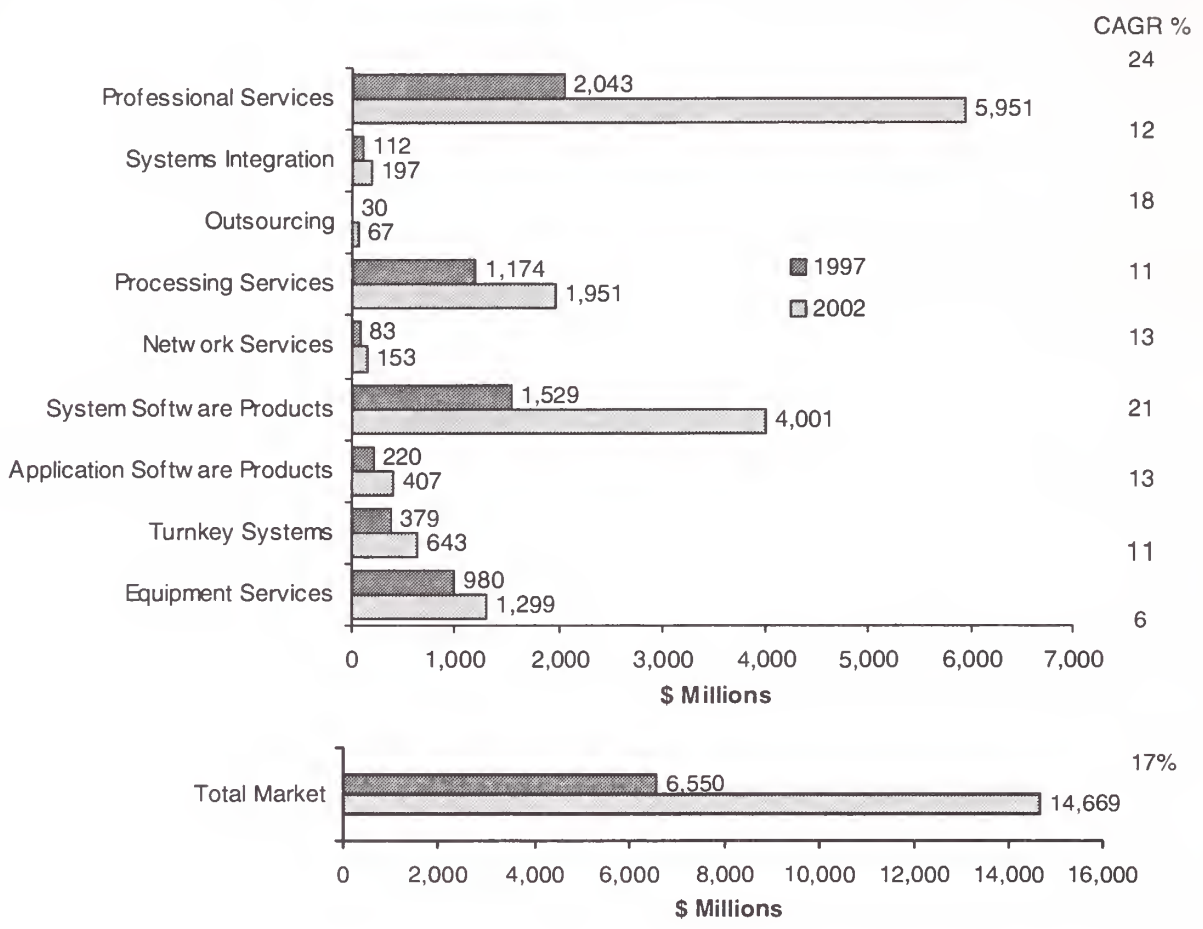
Exhibit 5

IT Software & Services Market Growth - Middle East / Africa 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Service Category

	Middle East / Africa	Worldwide
Outsourcing	18	20
Systems Integration	12	17
Systems Software Products	13	11
Network Services	13	17
Professional Services	24	12
Turnkey Systems	11	13
Processing Services	11	12
Application Software Products	21	15
Equipment Services	6	2

Source: INPUT

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User Expenditures for IT

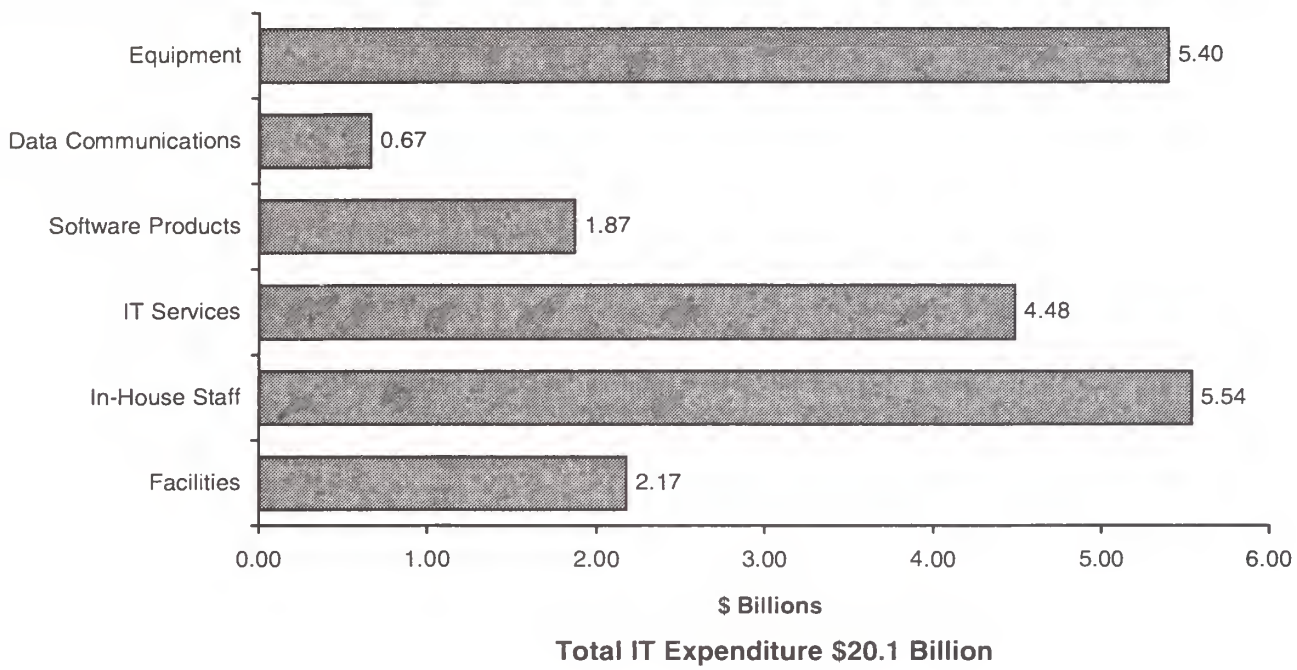
Exhibit 7 provides an assessment of all user expenditures on IT including internal staff and facilities.

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 8 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 7

Total Information Technology Related Expenditures - Middle East / Africa 1997



Total IT Expenditure $20.1 Billion

Source: INPUT

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Exhibit 8

IT Software & Services Market
Forecast by Product/Service Category East / Africa, 1997-2002

Delivery Modes	U.S. $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	1,634	25%	2,043	2,529	3,146	3,883	4,799	5,951	24%
Systems Integration	101	11%	112	125	140	157	176	197	12%
Outsourcing	25	20%	30	35	41	49	57	67	18%
Processing Services	1,067	10%	1,174	1,304	1,434	1,592	1,758	1,951	11%
Network Services	73	13%	83	94	106	120	135	153	13%
Application Software	1,285	19%	1,529	1,847	2,234	2,720	3,306	4,001	21%
System Software	196	12%	220	250	285	320	360	407	13%
Turnkey Systems	345	10%	379	421	468	521	579	643	11%
Equipment Services	926	6%	980	1,037	1,097	1,161	1,228	1,299	6%
Grand Total	5,653	16%	6,550	7,642	8,951	10,522	12,398	14,669	17%

Source: INPUT

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Market Profile

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United States

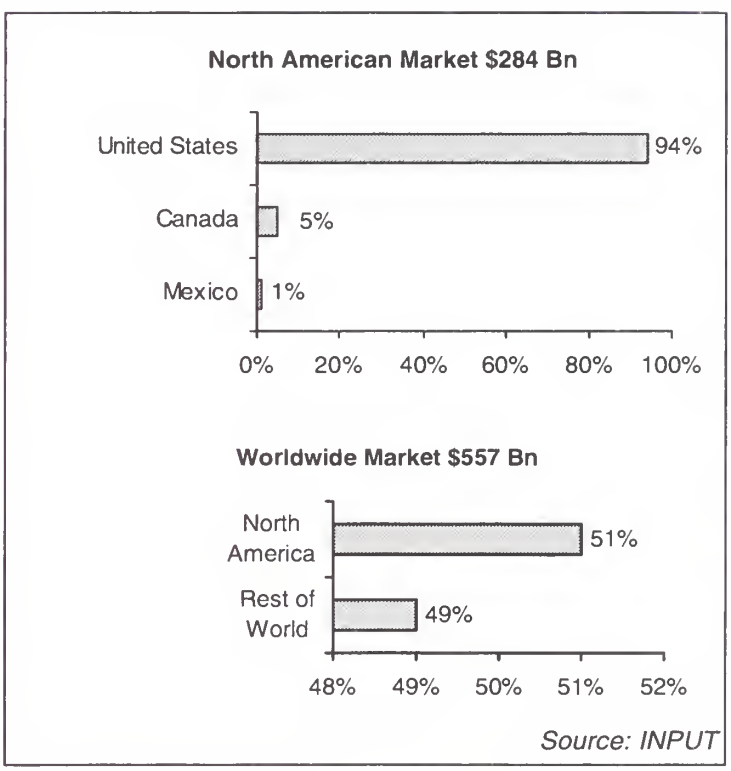
Key Market Statistics 1997

The U.S. IT Software & Services market is the largest in the World, accounting for almost half of all IS expenditure, see Exhibit 1.

Key Statistics for the United States are:

- Total IT Software & Services Market 1997 -$269 Billion
- Internet/Intranet Services Market 1997 - $25.6 Billion
- Total IT User Expenditure $685 Billion
- GDP $7.5 Trillion and current growth forecast at 3.8%
- Workforce 133 million, 50% of the total population of 266 million.

IT Software & Services Markets 1997



Source: INPUT

Key Indicators

- The U.S. IT Software & Services Market is estimated to represent 39% of all IT user expenditure.
- The Internet /Intranet Services proportion is expected to account for 9.5% of all IT Software & Services expenditure in 1997.

Exhibit 1

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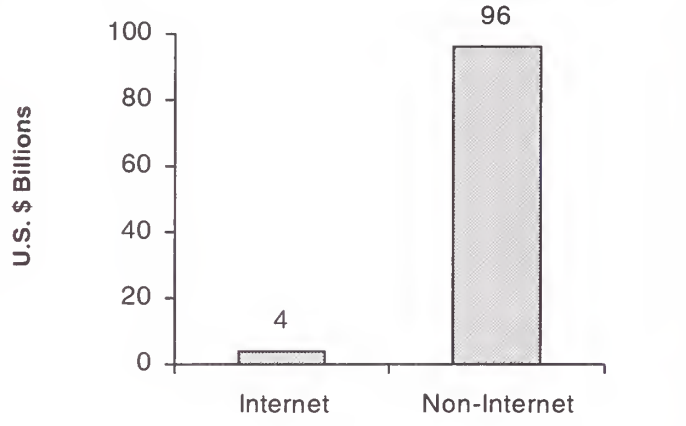
- The total value of goods and services sold electronically in United States in 1997 is estimated to be about $100 billion, see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- United States 1997

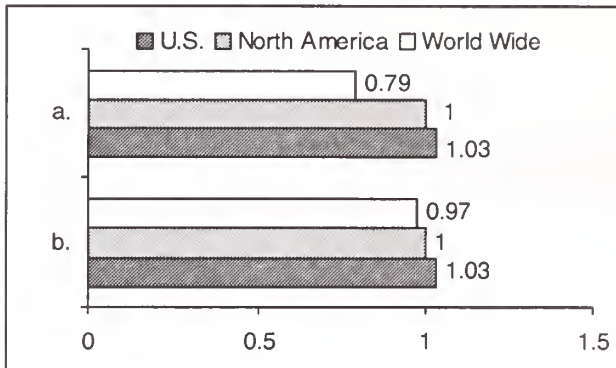


Source: INPUT

- Exhibit 3 shows comparative ratios for the United States, North America and the World which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for North America.

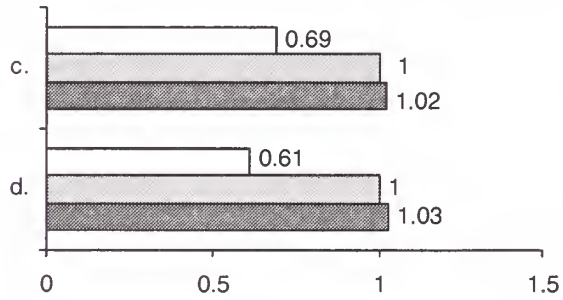
Exhibit 3

Comparative Ratios for Electronic Business



a. Average User Expenditures for IT as proportion of total revenues - (North America 3.8%).

b. IT Software & Services as a proportion of all IT expenditure - (North America - 38%).



c. Internet / Intranet services as a proportion of total IT Software & Services expenditure - (North America - 9.4%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (North America - 0.59%).

Source: INPUT

Economic Context

The current status of the U.S. economy is characterised by the following:

- *Economic growth:*
  – Official growth target for 1997, 3.8% and 2% targeted for 1998

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- *Employment:*
  - 50% of the U.S. population is represented within the working population, against a North American average of 46%.
  - Structure of employment in the United States is shown in Exhibit 4.

- *Unemployment:*
  – 5.4% level for 1996 is expected to decline to a slightly improved 5% in 1997, and 5.1% in 1998.

- - GDP deflators are estimated at:
  1996 2%
  1997 2%
  1998 2.2%

Exhibit 4

Economic Structure

	GDP%		Employment %	
	United States	North America	United States	North America
Agriculture	1.9	2	3	7
Industry	23.4	24	24	23
Services	74.9	74	73	69

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and Internet / Intranet component are shown in Exhibit 5.

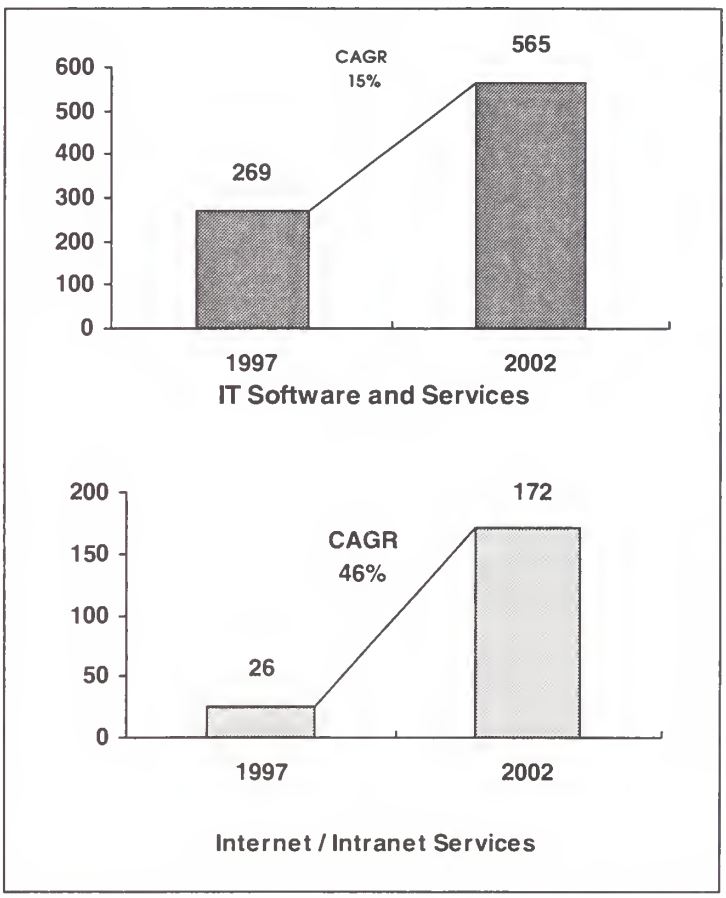
Forecasts for the nine principal categories of information services expenditure in the U.S. market are shown in Exhibit 6.

Exhibit 7 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category are provided in Exhibit 9.

Exhibit 5

IT Software & Services Growth United States 1997 - 2002



Source: INPUT

Exhibit 6

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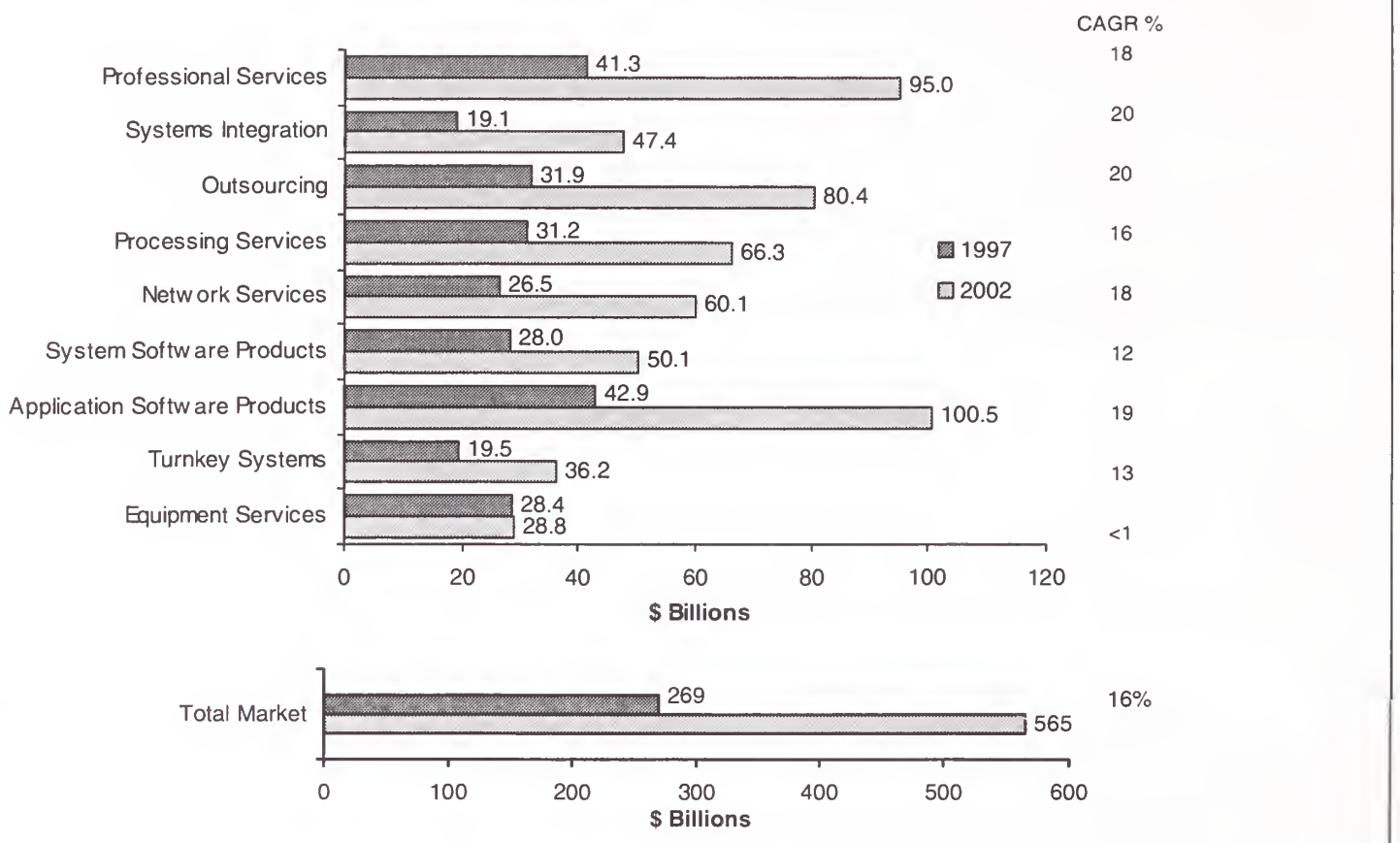
IT Software & Services Market Growth - United States 1997 - 2002



Source: INPUT

Exhibit 7

Growth Rate Comparison of Product/Services Category

	United States	North America	Worldwide
Outsourcing	20	21	20
Systems Integration	18	17	17
Application Software Products	19	18	15
Network Services	18	16	17
Professional Services	18	19	12
Turnkey Systems	18	12	13
Processing Services	15	15	12
Systems Software Products	12	15	11
Equipment Services	0.3	0.4	2

Source: INPUT

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User Expenditures for IT

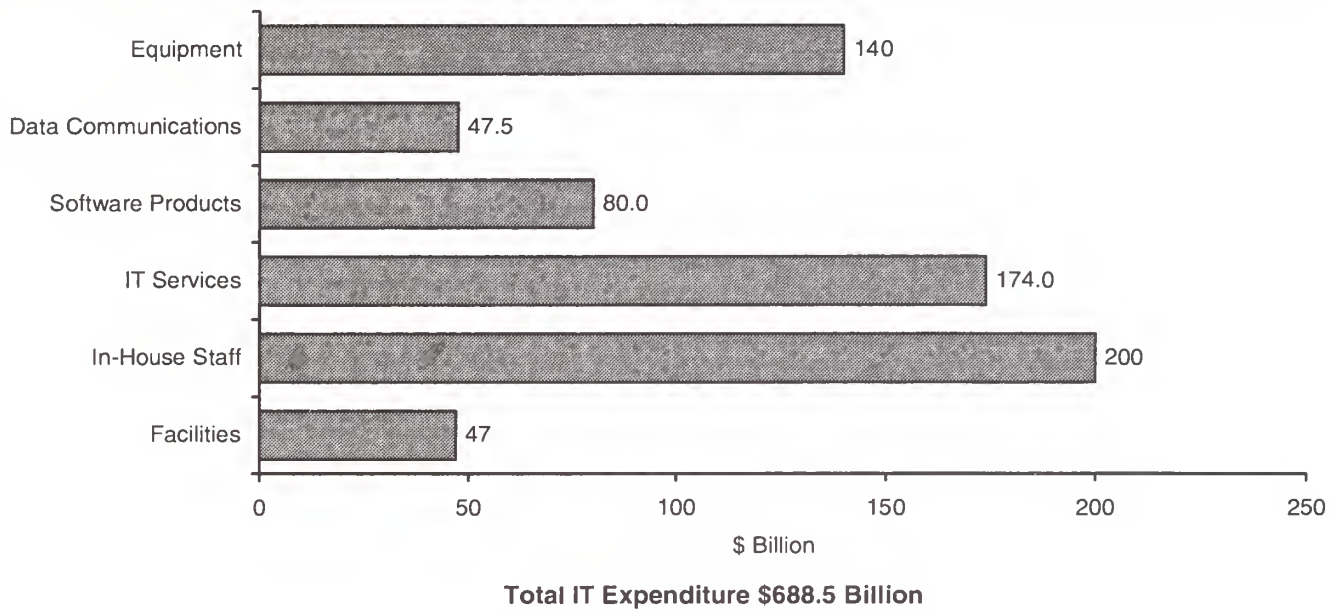
Exhibit 8 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 9 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 8

Total Information Technology Related Expenditures - United States 1997



Total IT Expenditure $688.5 Billion

Source: INPUT

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Exhibit 9

IT Software & Services Market
Forecast by Product/Services Category United States, 1997-2002

PRODUCT SERVICE CATEGORIES	GROWTH								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
INDUSRY TOTAL	**235,626**	14%	**268,631**	**308,665**	**357,665**	**413,228**	**482,120**	**564,709**	16%
Professional Services	34,738	19%	41,272	49,950	60,150	69,850	81,880	94,950	18%
- IS Consulting	9,681	23%	11,936	14,917	18,556	22,245	26,865	32,083	22%
- Education & Training	5,283	18%	6,239	7,439	8,860	10,155	11,766	13,476	17%
- Software Development	19,774	17%	23,097	27,594	32,7343	37,450	43,249	49,391	16%
Systems Integration	16,373	17%	19,117	22,499	26,820	32,245	38,966	47,364	20%
- Equipment	6,648	9%	7,274	8,093	9,112	10,333	11,769	13,448	13%
- Software Products	1,443	18%	1,700	2,017	2,437	2,966	3,648	4,495	21%
- Professional Services	7,618	23%	9,391	11,529	14,258	17,736	22,098	27,678	24%
- Other	664	13%	751	867	1,019	1,211	1,450	1,743	18%
Outsourcing	26,606	20%	31,904	37,875	45,264	54,482	65,993	80,421	20%
- Platform Operations	6,288	10%	6,931	7,497	8,117	8,817	9,599	10,467	9%
- Applications Operations	10,244	19%	12,219	14,198	16,527	19,282	22,541	26,381	17%
- Desktop Services	3,230	25%	4,032	4,986	6,189	7,705	9,589	11,954	24%
- Network Management	3,145	23%	3,879	4,877	6,149	7,772	9,852	12,509	26%
- Application Management	1,204	20%	1,444	1,725	2,070	2,488	2,994	3,610	20%
- Business Operations	2,496	36%	3,400	4,592	6,213	8,418	11,417	15,500	35%
Processing Services	28,297	10%	31,180	35,961	41,634	48,419	56,549	66,334	16%
- Transaction Processing	21,987	9%	23,982	27,856	32,489	38,079	44,833	53,039	17%
- Utility Processing	1,000	1%	1,005	985	965	945	925	900	-2%
- Other Processing	5,310	17%	6,193	7,120	8,180	9,395	10,790	12,395	15%
Network Services	22,220	19%	26,455	30,751	36,052	42,424	50,315	60,124	18%
- Content Services	17,802	17%	20,803	23,748	27,304	31,393	36,334	42,278	15%
- Other Network Services	4,417	28%	5,652	7,003	8,748	11,031	13,981	17,846	26%
Applications SW Products	36,427	18%	42,863	50,365	59,438	70,496	83,992	100,473	19%
- Enterprise systems	6,707	9%	7,322	7,998	8,766	9,660	10,658	11,808	10%
- Distributed Systems	8,355	12%	9,382	10,657	12,130	13,839	15,823	18,118	14%
- Client Systems	21,365	22%	26,159	31,710	38,542	46,997	57,512	70,547	22%
Turnkey Systems	17,577	11%	19,481	21,965	24,789	28,066	31,846	36,165	13%
- Equipment	6,638	6%	7,055	7,965	8,905	10,037	11,323	12,745	13%
- Software Products	6,975	12%	7,837	8,756	9,798	11,000	12,382	13,969	12%
- Professional Services	3,964	16%	4,589	5,285	6,085	7,029	8,140	9,451	16%
Systems SW Products	24,888	13%	28,010	30,949	34,486	38,746	43,881	5,079	
- Enterprise servers	8,879	2%	9,100	9,062	9,044	9,043	9,058	9,089	12%
- Distributed Servers	8,022	11%	8,900	9,775	10,757	11,861	13,103	14,502	0%
- Client	7,987	25%	10,010	12,112	14,686	17,843	21,720	26,488	10%
									21%
Grand Total	28,500	-0.5%	28,350	28,350	28,500	28,500	28,700	28,800	0.3%

Source: INPUT

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Market Profile

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Canada

Key Market Statistics 1997

The Canadian IT Software & Services market is the second largest in North America, representing 5% of that market, see Exhibit 1.

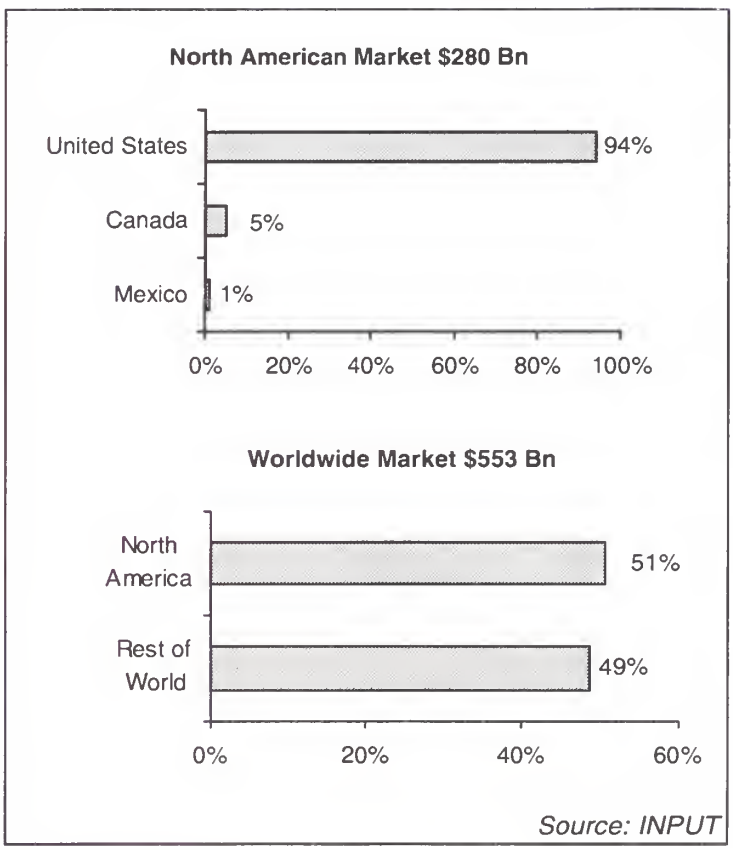
Key Statistics for Canada are:

- Total IT Software & Services Market 1997 -US$13.9 Billion
- Internet/Intranet Services Market 1997 - US$1.22 Billion
- Total IT User Expenditure US$38.7 Billion
- GDP US$603 Billion and current growth forecast at 3.5%
- Workforce 13.4 million, 46% of the total population of 28.8 million.

N.B. US$ are used throughout this profile.

Exhibit 1

IT Software & Services Markets 1997



Source: INPUT

Key Indicators

- The Canadian IT Software & Services Market is estimated to represent 36% of all IT user expenditure.

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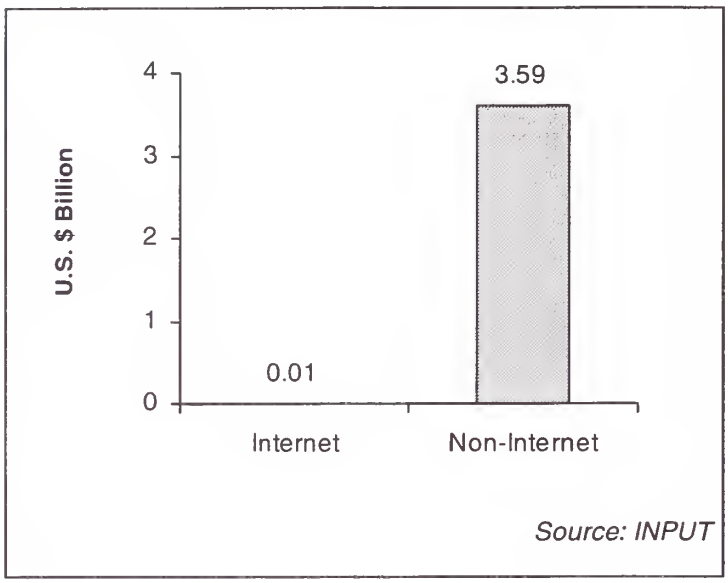
- The Internet /Intranet Services proportion is expected to account for 6.2% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in Canada in 1997 is estimated to be $3.6 billion, see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- Canada 1997

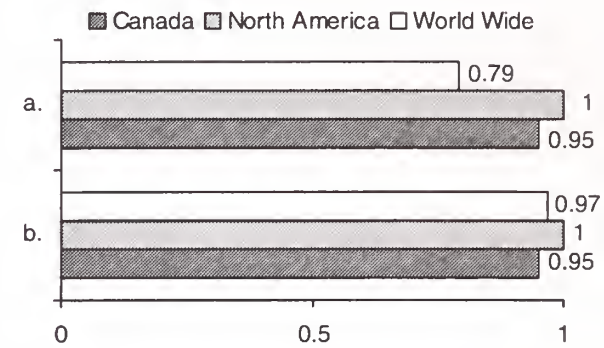


Source: INPUT

- Exhibit 3 shows comparative ratios for Canada, North America and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for North America.

Exhibit 3

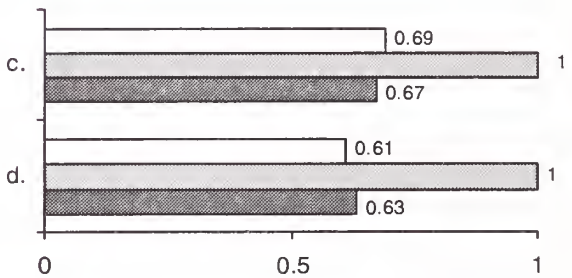
Comparative Ratios for Electronic Business



a. Average User Expenditures for IT as proportion of total revenues - (North America 3.8%).

b. IT Software & Services as a proportion of all IT expenditure - (North America - 38%).

c.



d. Internet / Intranet services as a proportion of total IT Software & Services expenditure - (North America - 9.4%).

e. Value of Goods and Services sold electronically as a ratio to total economic output - (North America - 0.59%).

Source: INPUT

Economic Context

The current status of the Canadian economy is characterised by the following:

- *Economic growth:*
  – Official growth target for 1997, 3.5% and 3.3% targeted for 1998

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- *Employment:*
  - 46% of the Canadian population is represented within the working population, equal to the North American average.

- - Structure of employment in Canada is shown in Exhibit 4.

- *Unemployment:*
  – 9.7% level for 1996 is expected to decline to a slightly improved 9.4% in 1997, and 9.1% in 1998.

- - GDP deflators are estimated at:
  1996 1.3%
  1997 1.4%
  1998 1.5%

Exhibit 4

Economic Structure

	GDP%		Employment %	
	Canada	North America	Canada	North America
Agriculture	2.8	2	4	7
Industry	31.6	24	23	23
Services	65.6	74	73	69

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and Internet / Intranet component are shown in Exhibit 5.

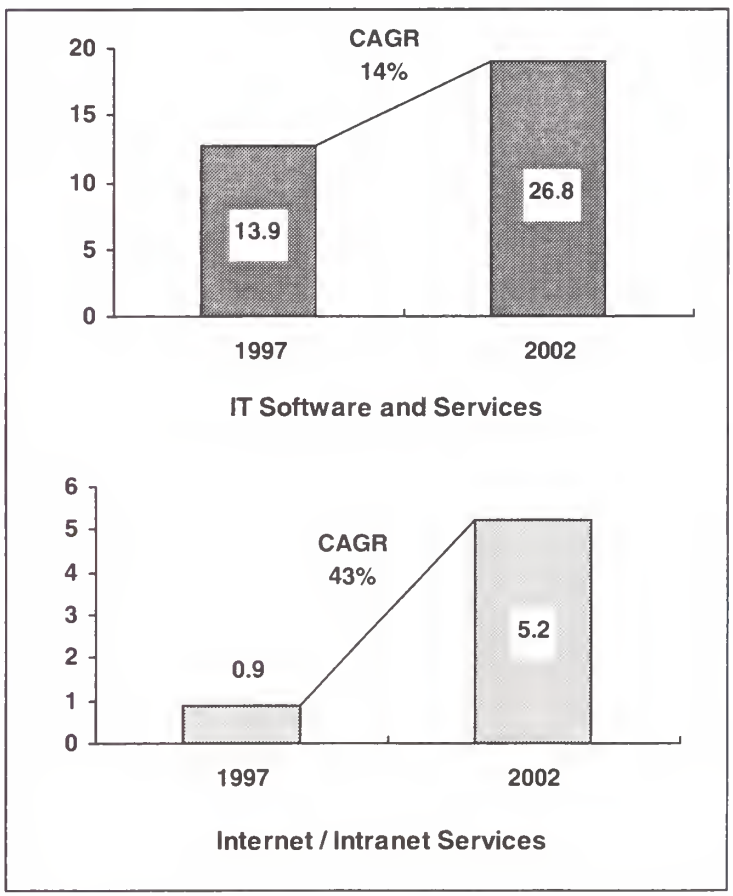
Forecasts for the nine principal categories of information services expenditure in the Canadian market are shown in Exhibit 6.

Exhibit 7 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category is provided in Exhibit 9.

Exhibit 5

IT Software & Services Growth Canada 1997 - 2002



Source: INPUT

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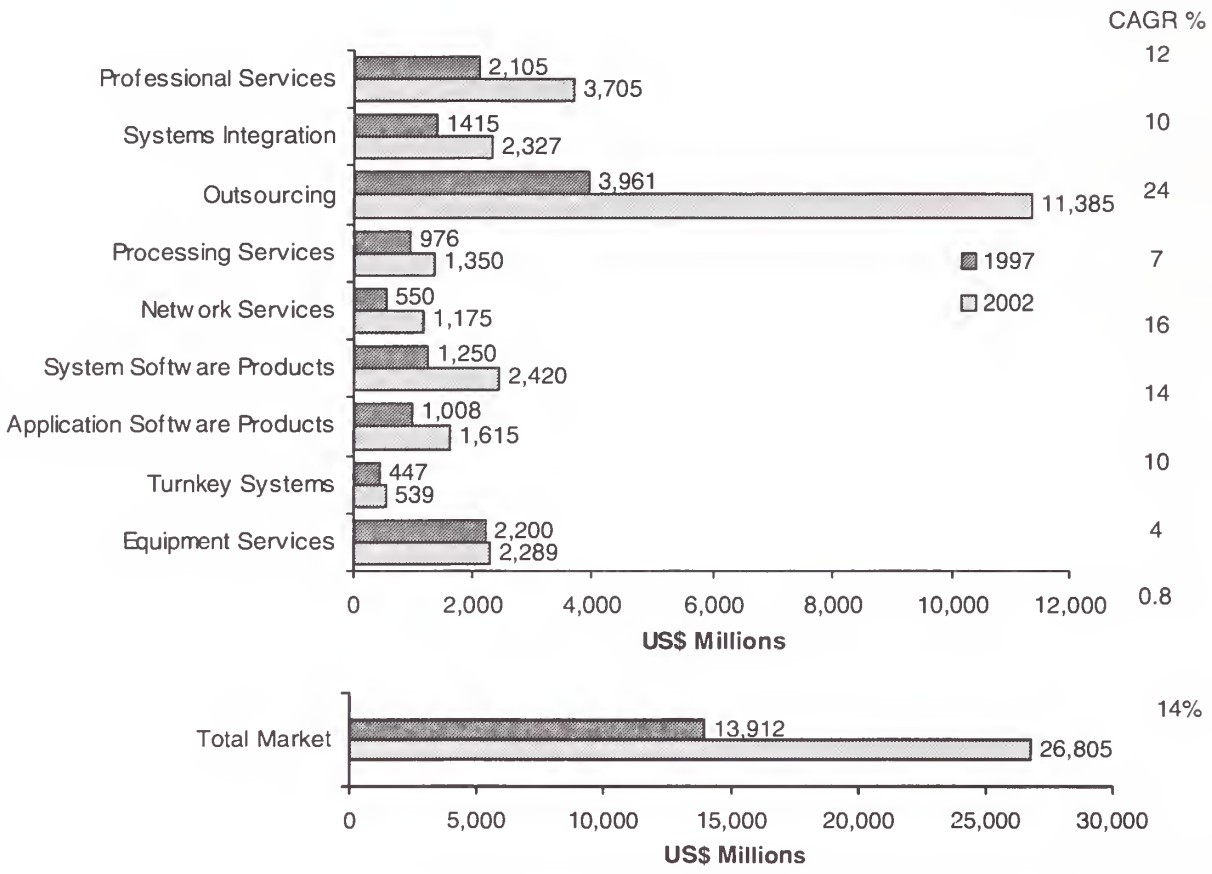
Exhibit 6

IT Software & Services Market Growth - Canada 1997 - 2002



Source: INPUT

Exhibit 7

Growth Rate Comparison of Product/Service Category

	Canada	North America	Worldwide
Outsourcing	24	21	20
Network Services	16	17	17
Application Software Products	14	18	15
Professional Services	12	16	12
Systems Integration	10	19	17
Systems Software Products	10	12	11
Processing Services	7	15	12
Turnkey Sstems	4	15	13
Equipment Services	0.8	0.4	2

Source: INPUT

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User Expenditures for IT

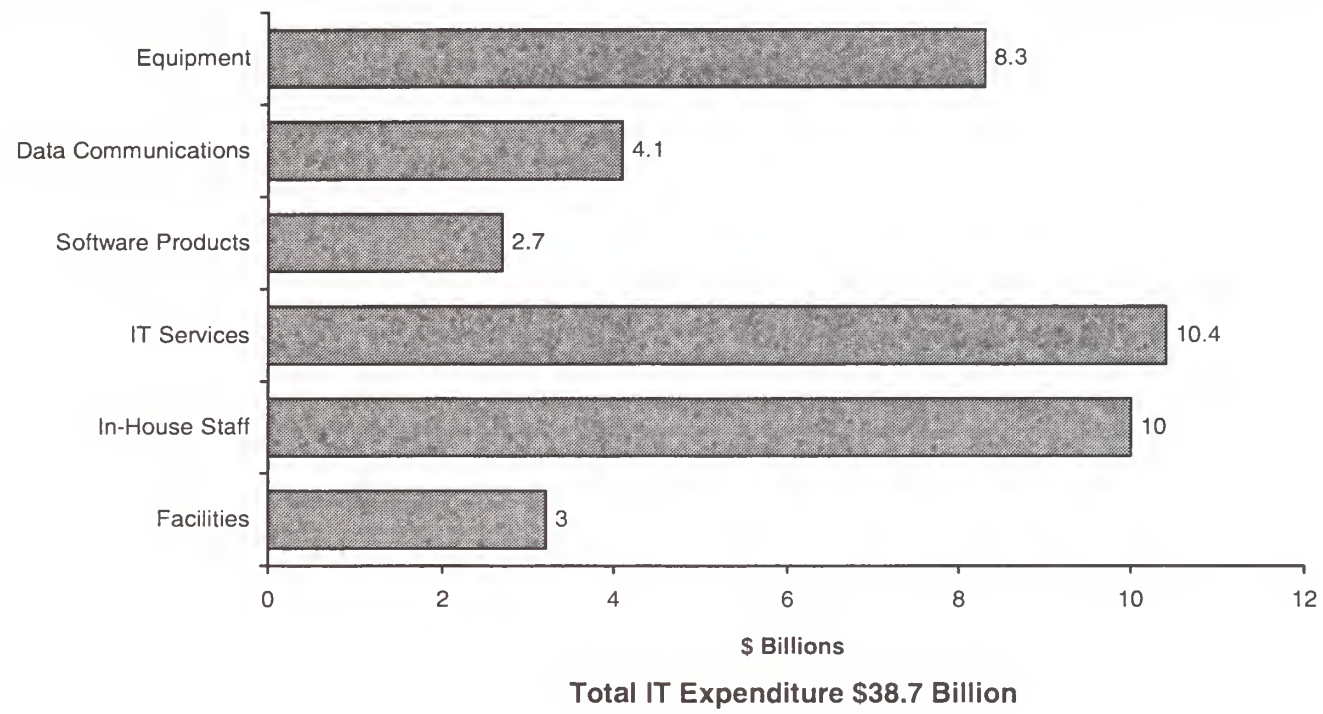
Exhibit 8 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 9 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 8

Total Information Technology Related Expenditures - Canada 1997



Total IT Expenditure $38.7 Billion

Source: INPUT

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Exhibit 9

IT Software & Services Market
Forecast by Product/Service Category Canada, 1997-2002

Delivery Modes	US $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	1,884	12%	2,105	2,355	2,640	2,955	3,310	3,705	12%
- IS Consulting	704	13%	795	890	1,000	1,120	1,255	1,405	12%
- Education & Training	342	11%	380	425	475	530	595	665	12%
- Software Development	838	11%	930	1,040	1,165	1,305	1,460	1,635	12%
Systems Integration	1,288	10%	1,415	1,559	1,722	1,901	2,104	2,327	10%
- Equipment	588	8%	635	685	740	800	865	935	8%
- Software Products	202	9%	220	240	265	290	320	350	10%
- Professional Services	451	13%	510	580	660	750	855	975	14%
- Other	47	7%	50	54	57	61	64	67	6%
Outsourcing	3,184	24%	3,961	4,885	6,029	7,445	9,205	11,385	24%
- Platform Operations	1,600	26%	2,016	2,540	3,200	4,030	5,080	6,400	26%
- Applications Operations	319	16%	370	430	500	580	675	785	16%
- Desktop Services	322	21%	390	475	580	705	860	1,050	22%
- Network Management	301	23%	370	455	560	690	850	1,045	23%
- Business Operations	642	27%	815	985	1,190	1,440	1,740	2,105	21%
Processing Services	909	7%	976	1,037	1,105	1,181	1,261	1,350	7%
- Transaction Processing	574	8%	620	660	705	755	805	860	7%
- Utility Processing	257	3%	265	270	275	280	285	290	2%
- Other Processing	78	17%	91	106	125	146	171	200	17%
Network Services	469	17%	550	640	745	865	1,010	1,175	16%
- Electronic Information Services	164	16%	190	220	255	290	335	385	15%
- Network Applications	305	18%	360	420	490	575	675	790	17%
Applications SW Products	1,111	13%	1,250	1,410	1,600	1,830	2,100	2,420	14%
- Mainframe	236	4%	245	255	265	275	285	295	4%
- Minicomputer	278	6%	295	305	315	330	345	360	4%
- Workstation/PC	597	19%	710	850	1,020	1,225	1,470	1,765	20%
Systems SW Products	927	9%	1,008	1,095	1,195	1,315	1,455	1,615	9.9%
- Mainframe	375	4%	390	400	410	420	430	440	2.4%
- Minicomputer	278	6%	295	305	315	330	345	360	4.1%
- Workstation/PC	274	18%	323	390	470	565	680	815	20.3%
Turnkey Systems	405	10%	447	464	482	500	519	539	4%
- Equipment	143	17%	167	170	174	177	181	184	2%
- Software Products	213	6%	226	235	245	255	265	275	4%
- Professional Services	50	9%	54	58	63	68	73	79	8%
Equipment Services	2,183	1%	2,200	2,218	2,235	2,253	2,271	2,289	0.8%
Grand Total	**12,359**	**13%**	**13,912**	**15,663**	**17,752**	**20,244**	**23,235**	**26,805**	**14%**

Source: INPUT

This Country Profile is issued as part of INPUT's World-Wide IT Software & Services Market Forecast Program. If you have questions or comments on this profile, please call your local INPUT organisation or Peter Lines at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, Tel: 650 961 3300 email: plines@input.com

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Market Profile

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Argentina

Key Market Statistics 1997

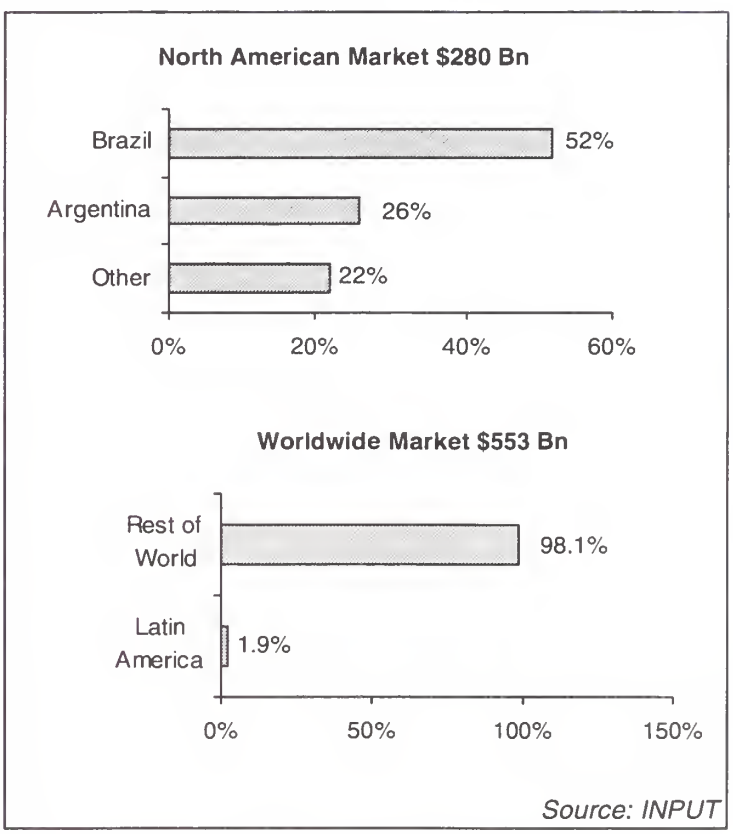
The Argentinean IT Software & Services represents 26% of the Latin America market see Exhibit 1.

Key Statistics for Argentina are:

- Total IT Software & Services Market 1997 -$2.7 Billion
- Internet/Intranet Services Market 1997 - $0.05 Billion
- Total IT User Expenditure $8.86 Billion
- GDP $318 Billion and current growth forecast at 6%
- Workforce 11 million, 31.4% of the total population of 35 million.

Exhibit 1

IT Software & Services Markets 1997



Source: INPUT

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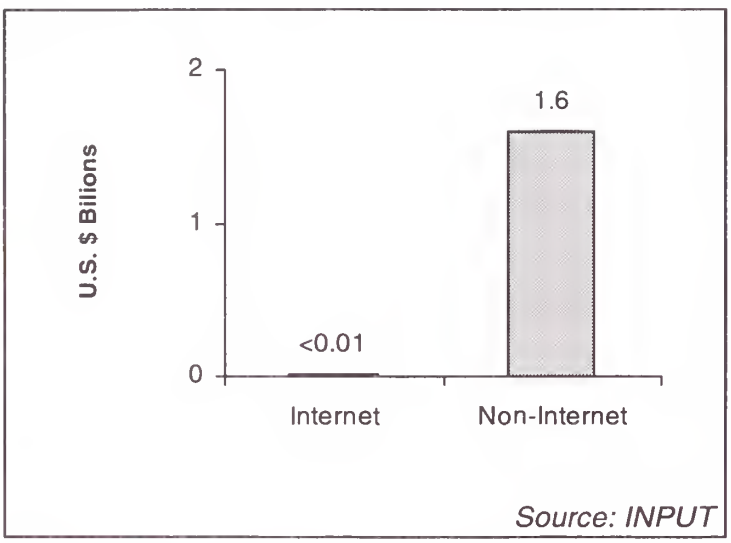
Key Indicators

- The Argentinean IT Software & Services Market is estimated to represent 30% of all IT user expenditure.
- The Internet /Intranet Services proportion is expected to account for 2% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in Argentina in 1997 is estimated to be about $1.52 billion, see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- Argentina 1997

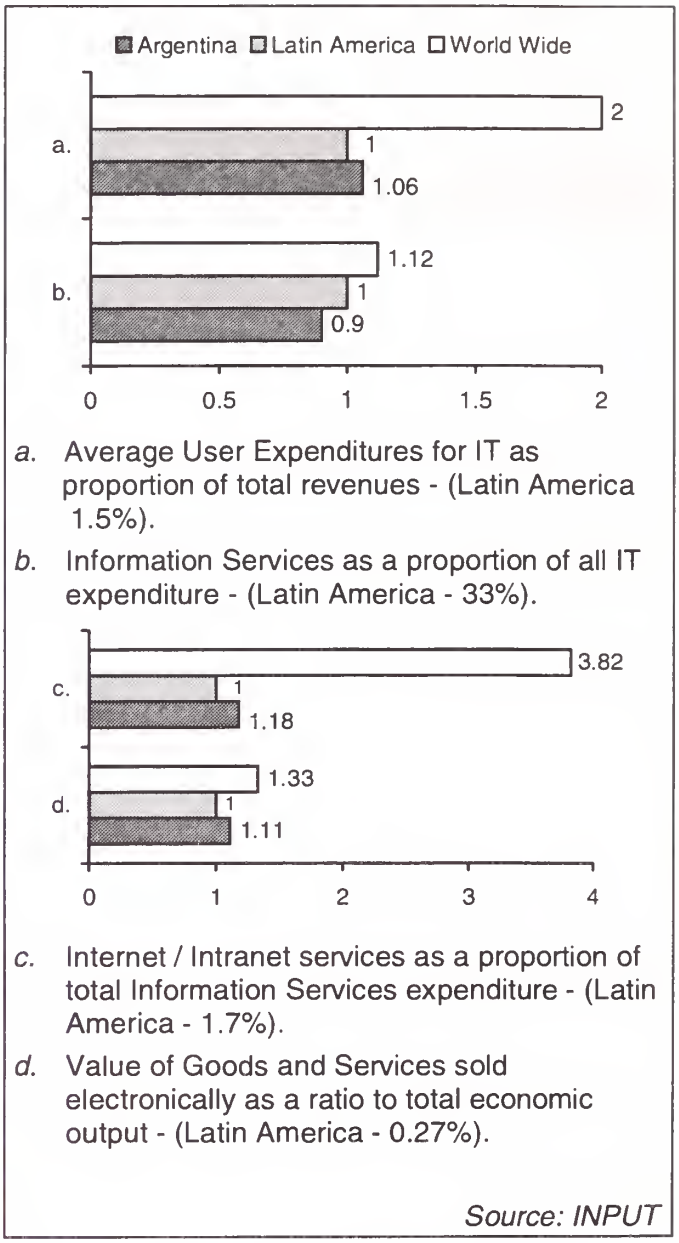


Source: INPUT

- Exhibit 3 shows comparative ratios for Argentina, Latin America and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for Latin America.

Exhibit 3

Comparative Ratios for Argentina



a. Average User Expenditures for IT as proportion of total revenues - (Latin America 1.5%).

b. Information Services as a proportion of all IT expenditure - (Latin America - 33%).

c. Internet / Intranet services as a proportion of total Information Services expenditure - (Latin America - 1.7%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (Latin America - 0.27%).

Source: INPUT

Economic Context

The current status of the Argentinean economy is characterised by the following:

- *Economic growth:*
  – Official growth target for 1997 - 6%
- *Employment:*
  - 31.4% of the Argentinean population is represented within the working population.

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- *Unemployment:*
  – 16% level for 1996 is expected to remain high for the foreseeable future

- *Consumer Price Inflation estimated at:*
  – 1997 0%

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet component are shown in Exhibit 4.

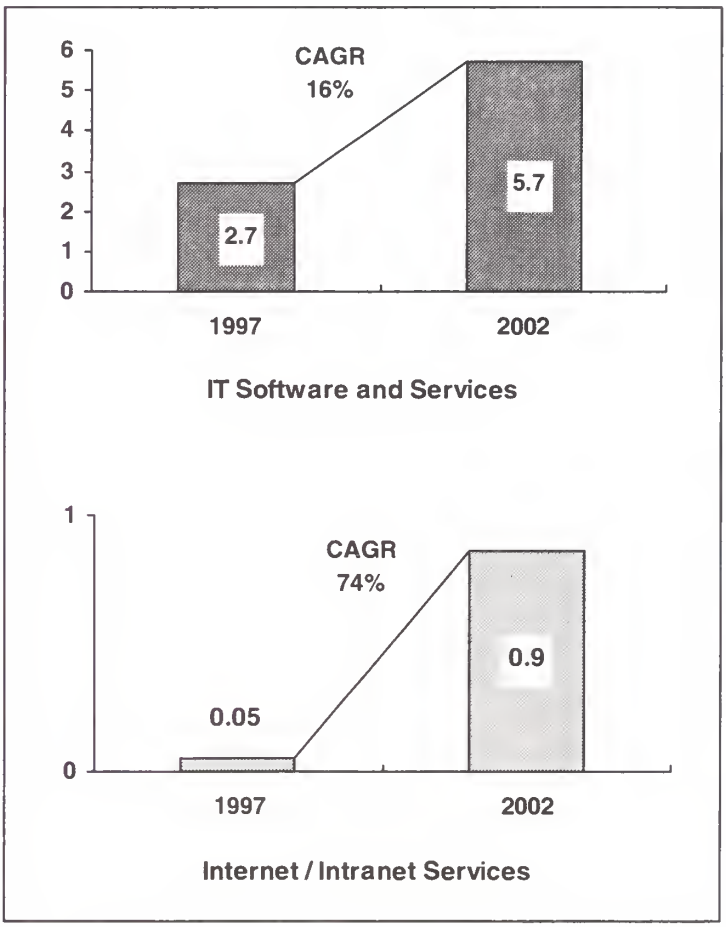
Forecasts for the nine principal categories of information services expenditure in the Argentinean market are shown in Exhibit 5.

Exhibit 6 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category are provided in Exhibit 8.

Exhibit 4

IT Software & Services Growth Argentina 1997 - 2002



Source: INPUT

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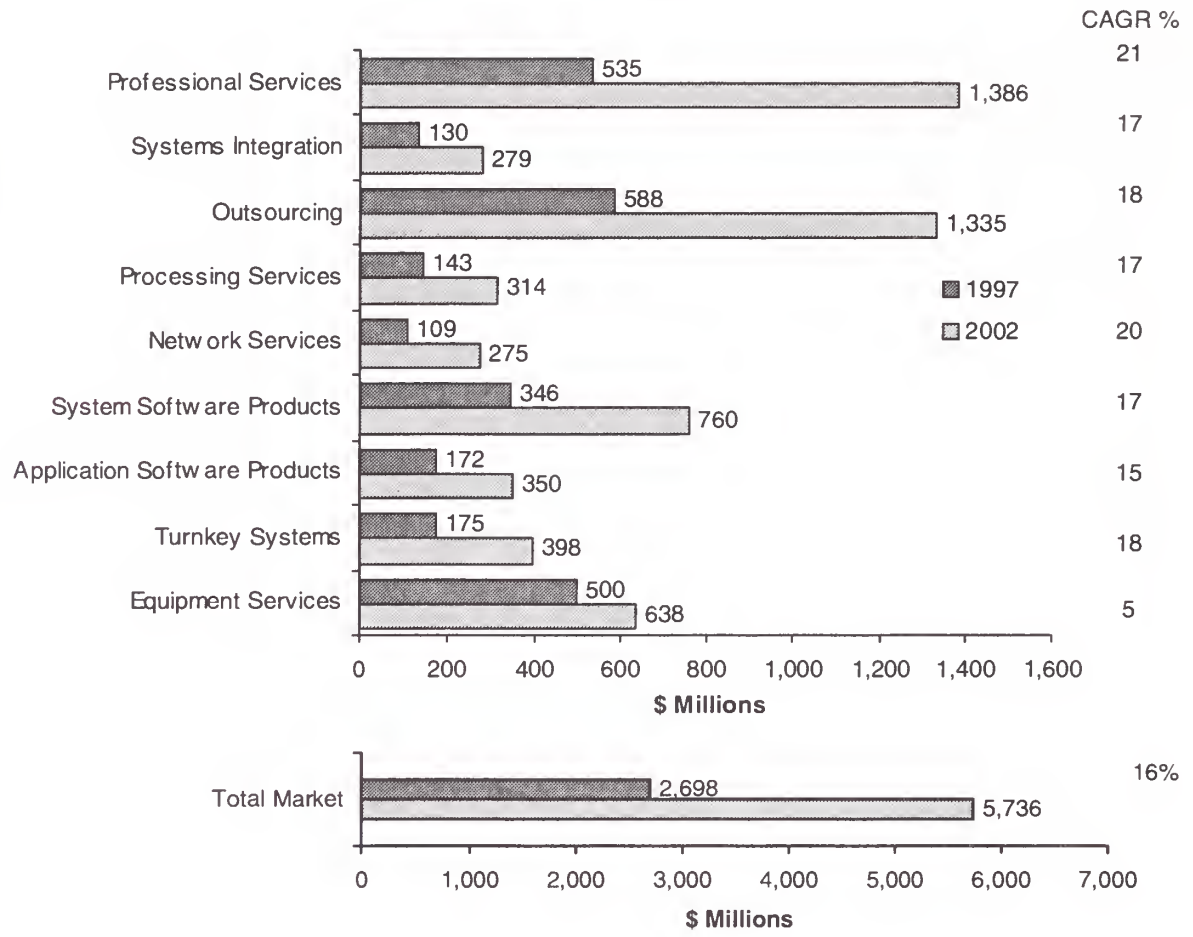
Exhibit 5

IT Software & Services Market Growth - Argentina 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Service Category

	Argentina	Latin America	Worldwide
Professional Services	21	14	12
Network Services	20	15	17
Outsourcing	18	19	20
Turnkey Systems	18	17	13
Processing Services	17	16	12
Application Software Products	17	16	15
Systems Integration	17	18	17
Systems Software Products	15	20	11
Equipment Services	5	5	2

Source: INPUT

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User Expenditures for IT

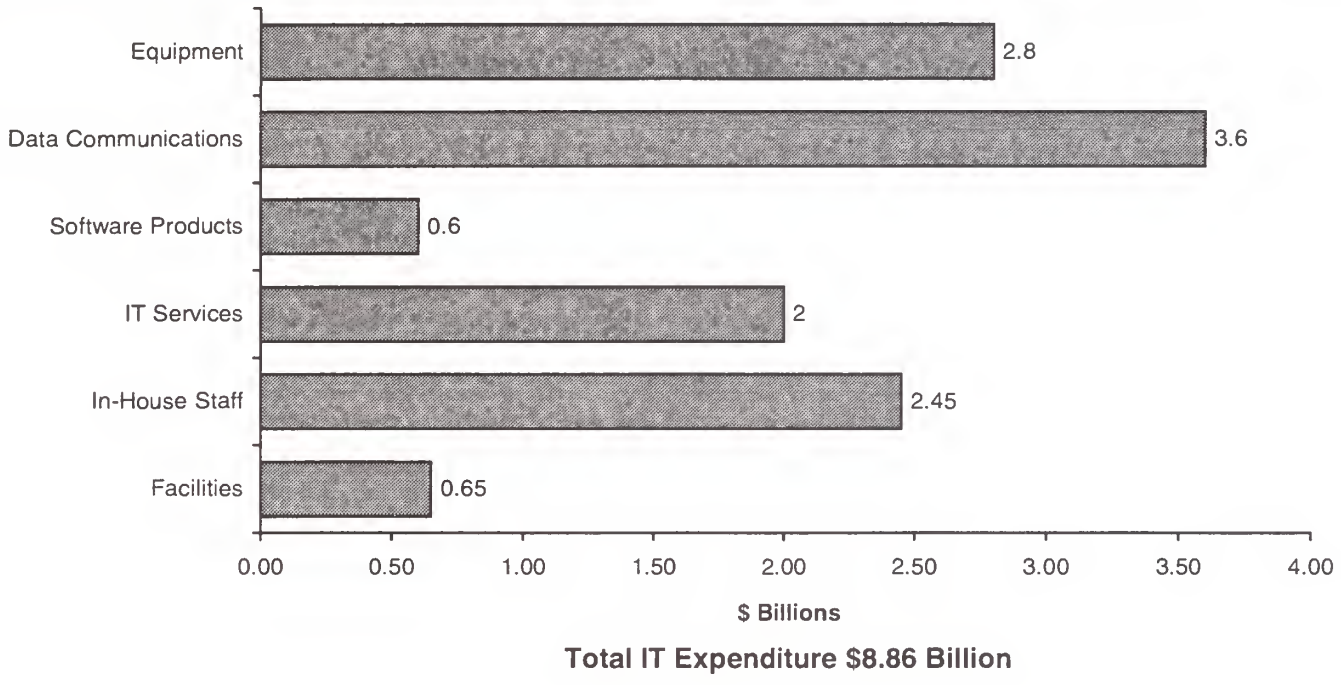
Exhibit 7 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 8 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 7

Total Information Technology Related Expenditures - Argentina 1997



Total IT Expenditure $8.86 Billion

Source: INPUT

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Exhibit 8

IT Software & Services Market
Forecast by Product/Service Category Argentina, 1997-2002

Delivery Modes	US $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	440	22%	535	647	782	950	1,145	1,386	21%
- IS Consulting	109	19%	130	155	185	220	260	310	19%
- Education & Training	55	19%	65	77	92	110	130	155	19%
- Software Development	276	23%	340	415	505	620	755	921	22%
Systems Integration	111	18%	130	152	177	207	241	279	17%
- Equipment	23	17%	27	30	35	40	45	50	13%
- Software Products	30	17%	35	43	52	62	74	89	21%
- Professional Services	52	19%	62	72	83	97	112	130	16%
- Other	6	9%	6	7	7	8	9	10	11%
Outsourcing	501	17%	588	693	819	962	1,135	1,335	18%
- Platform Operations	302	17%	353	413	485	565	660	770	17%
- Applications Operations	199	18%	235	280	334	397	475	565	19%
Processing Services	123	16%	143	166	193	228	265	314	17%
- Transaction Processing	68	22%	83	100	122	150	180	220	22%
- Utility Processing	31	8%	34	36	39	42	45	48	7%
- Other Processing	24	10%	26	29	33	37	41	46	12%
Network Services	94	16%	109	131	158	190	230	275	20%
- Electronic Information Services	69	15%	79	96	115	140	170	205	21%
- Network Applications	25	20%	30	35	43	50	60	70	18%
Applications SW Products	298	16%	346	405	475	555	650	760	17%
Systems SW Products	151	14%	172	200	230	265	305	350	15%
Turnkey Systems	150	17%	175	205	243	284	335	398	18%
- Equipment	59	15%	68	76	85	96	108	123	13%
- Software Products	39	21%	47	56	69	82	99	120	21%
- Professional Services	52	15%	60	73	89	106	128	155	21%
Equipment Services	476	5%	500	525	551	579	608	638	5%
Grand Total	2,344	15%	2,698	3,123	3,629	4,219	4,915	5,736	16%

Source: INPUT

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Brazil

Key Market Statistics 1997

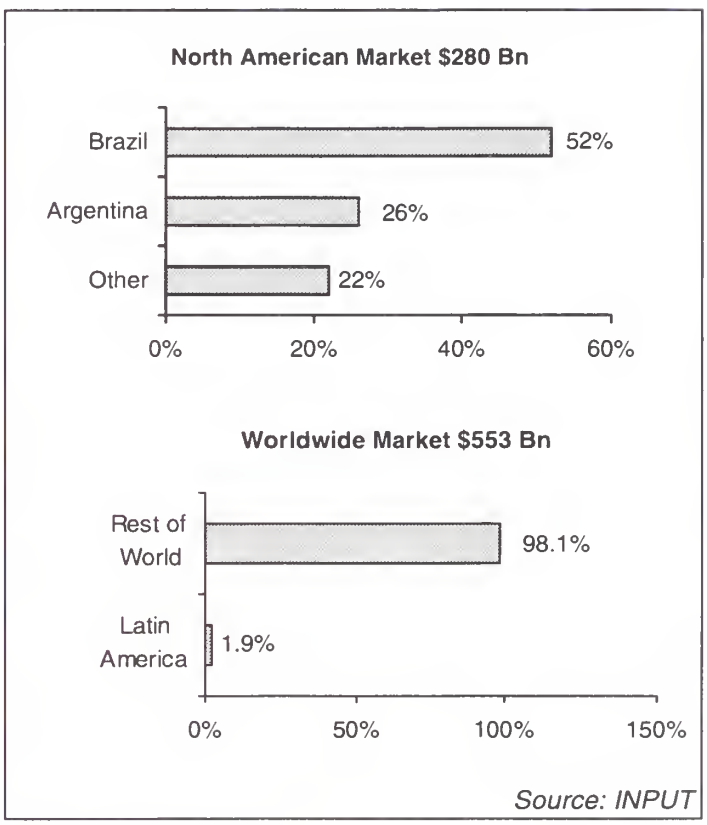
The Brazilian IT Software & Services represents 52% of the Latin America market, see Exhibit 1.

Key Statistics for Brazil are:

- Total IT Software & Services Market 1997 -$5.35 Billion
- Internet/Intranet Services Market 1997 - $0.107 Billion
- Total IT User Expenditure $17.5 Billion
- GDP $640 Billion and current growth forecast at 5%
- Workforce 57 million, 35% of the total population of 163 million.

Exhibit 1

IT Software & Services Markets 1997



Source: INPUT

Key Indicators

- The Brazilian IT Software & Services Market is estimated to represent 31% of all IT user expenditure.
- The Internet /Intranet Services proportion is expected to account for 2% of all IT Software & Services expenditure in 1997.

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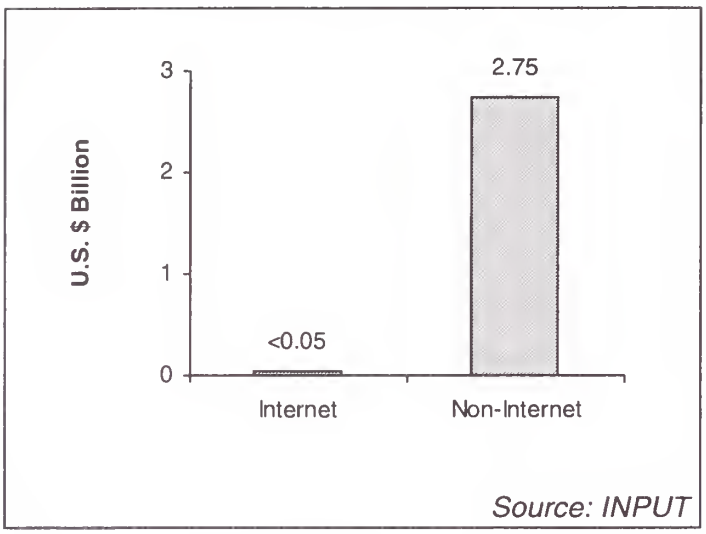
- The total value of goods and services sold electronically in Brazil in 1997 is estimated to be about $2.75 billion, see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- Brazil 1997



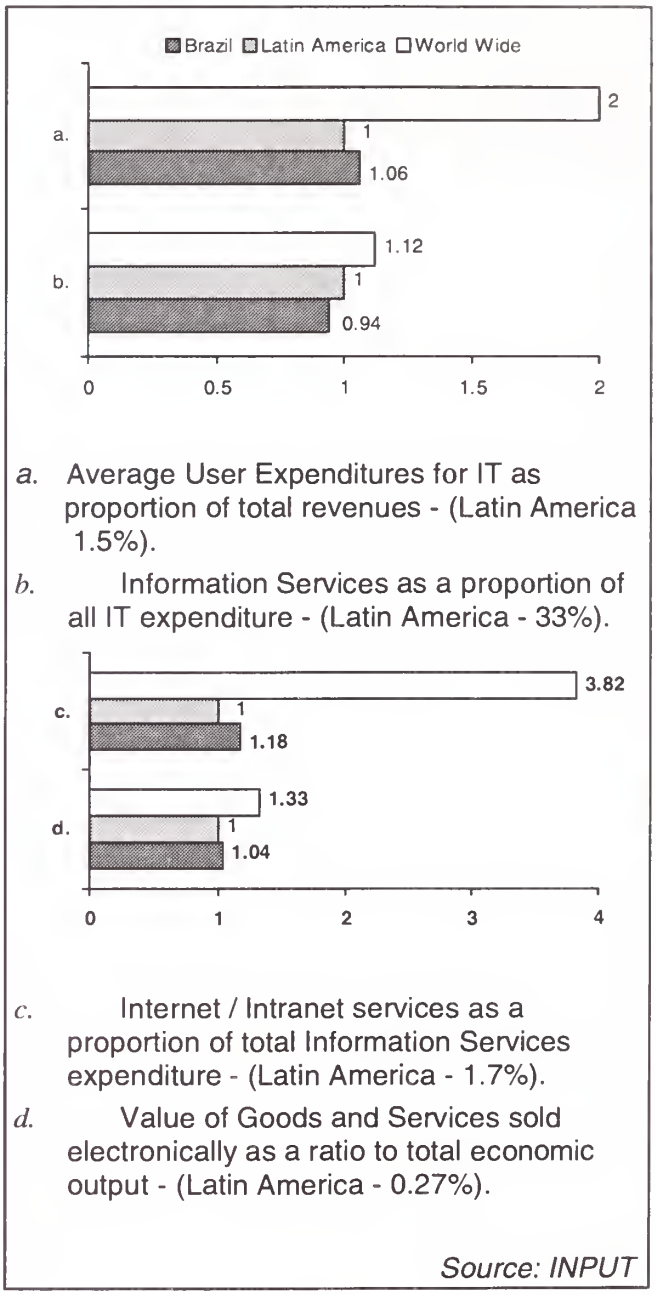
Source: INPUT

- Exhibit 3 shows comparative ratios for Brazil, Latin America and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.

- The ratios are normalised to the value of 1.0 for Latin America.

Exhibit 3

Comparative Ratios for Brazil



a. Average User Expenditures for IT as proportion of total revenues - (Latin America 1.5%).

b. Information Services as a proportion of all IT expenditure - (Latin America - 33%).

c. Internet / Intranet services as a proportion of total Information Services expenditure - (Latin America - 1.7%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (Latin America - 0.27%).

Source: INPUT

Economic Context

The current status of the Brazilian economy is characterised by the following:

- *Economic growth:*
  – Official growth target for 1997 - 5%

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- *Employment:*
  - 35% of the Brazilian population is represented within the working population.
- *Unemployment:*
  – 5% level for 1996.
- - Consumer Price Inflation estimated at:
  1996 23%
  1997 5%

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and Internet / Intranet component are shown in Exhibit 4.

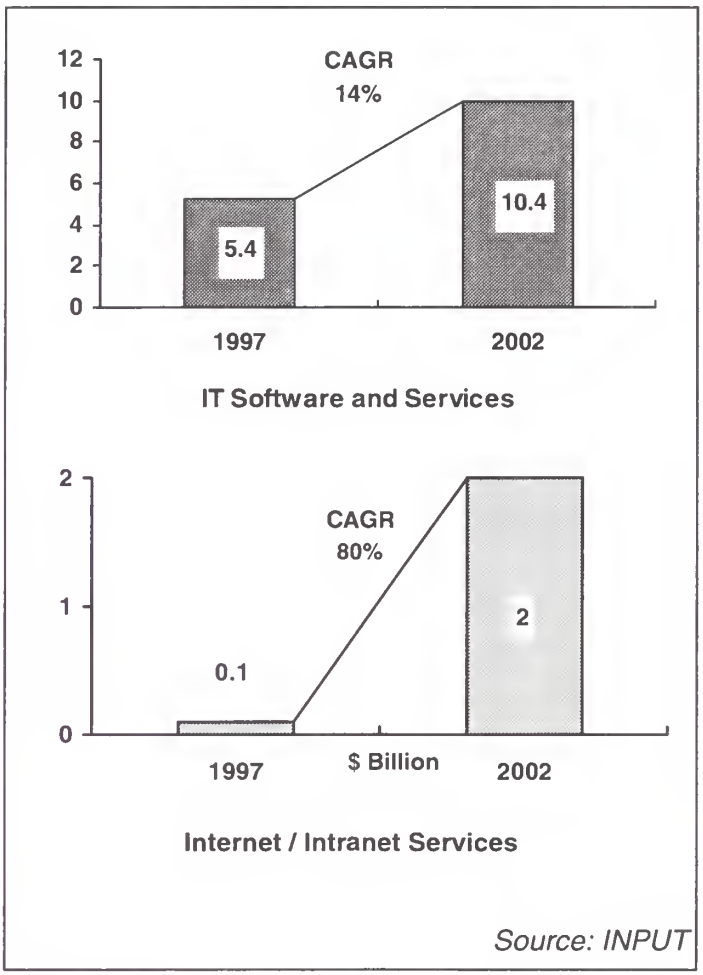
Forecasts for the nine principal categories of information services expenditure in the Brazilian market are shown in Exhibit 5.

Exhibit 6 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category are provided in Exhibit 8.

Exhibit 4

IT Software & Services
Brazil 1997 - 2002



Source: INPUT

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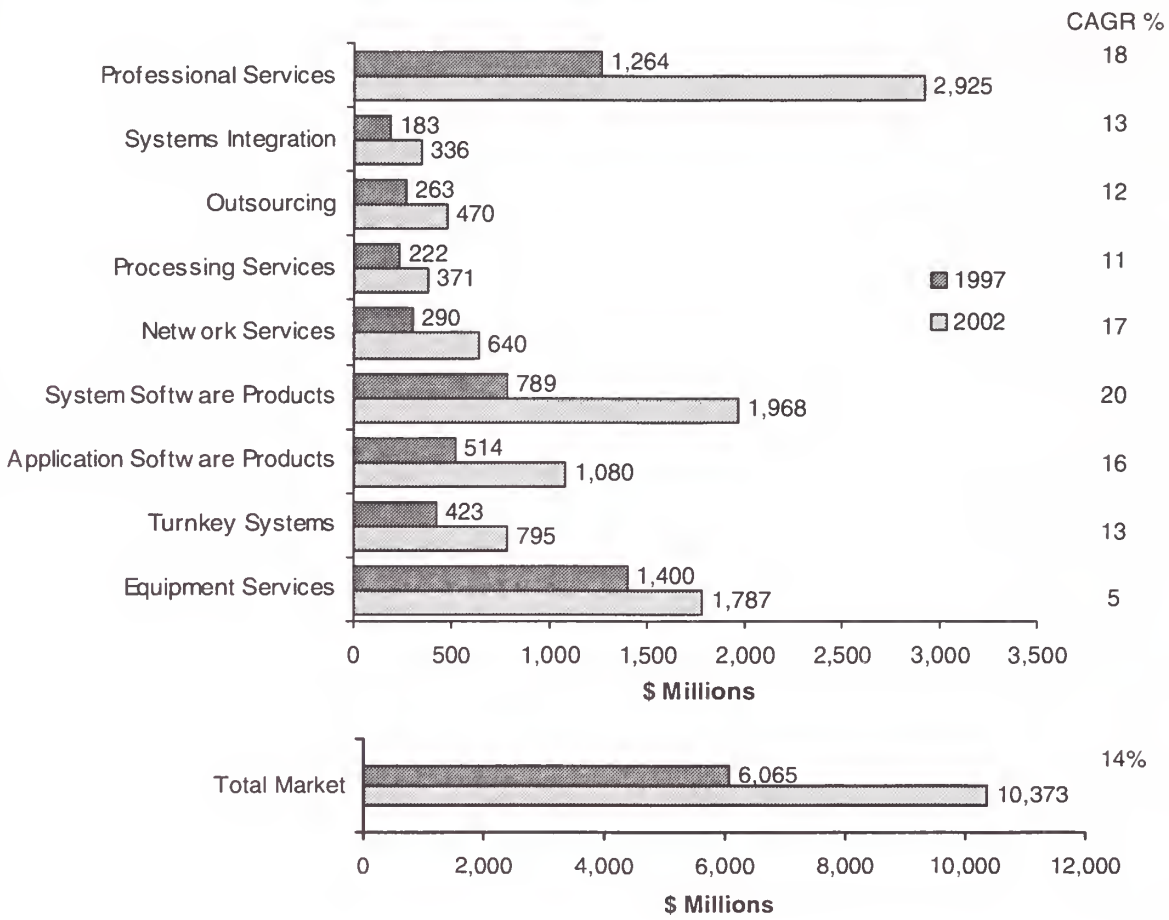
Exhibit 5

IT Software & Services Market Growth - Brazil 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Service Category

	Brazil	Latin America	Worldwide
Outsourcing	12	19	20
Network Services	17	15	17
Application Software Products	16	16	15
Professional Services	18	14	12
Systems Integration	13	18	17
Systems Software Products	16	20	11
Processing Services	11	16	12
Turnkey Systems	13	17	13
Equipment Services	5	5	2

Source: INPUT

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User Expenditures for IT

Exhibit 7 provides an assessment of all user expenditures on IT including internal staff and facilities

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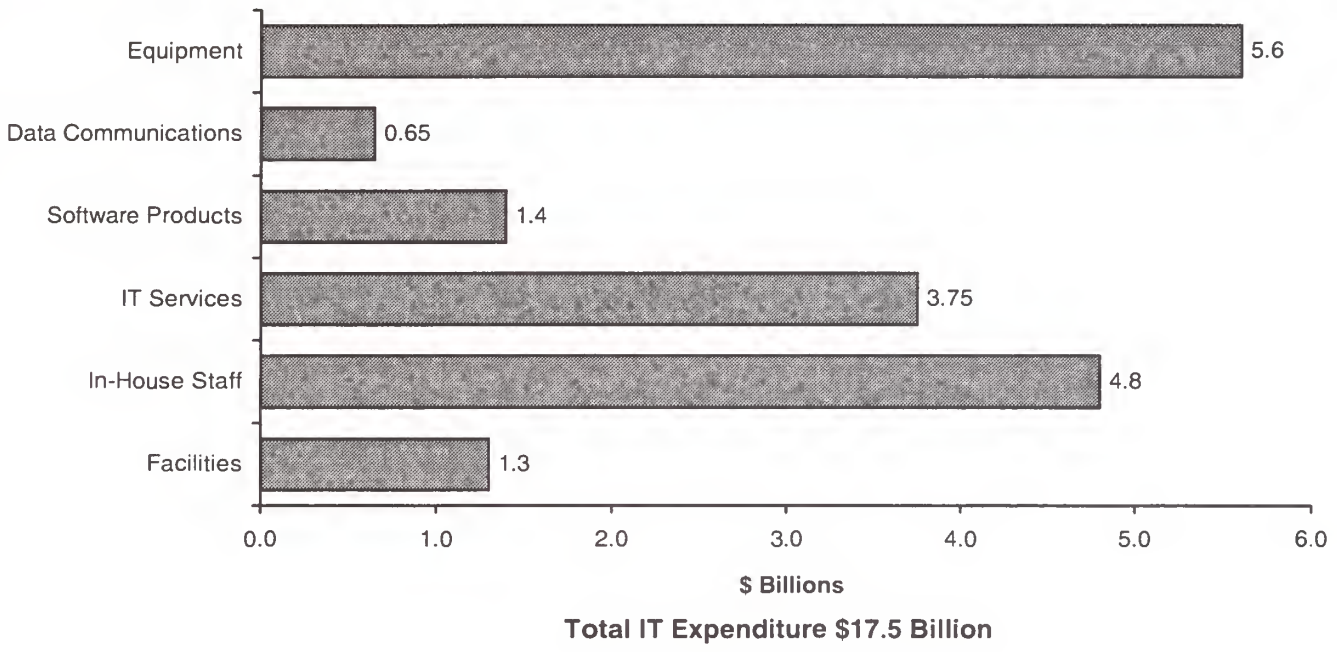

Source: INPUT

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Exhibit 8

IT Software & Services Market
Forecast by Product/Service Category Brazil, 1997-2002

Delivery Modes	US $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	1,088	16%	1,264	1,482	1,790	2,115	2,486	2,925	18%
- IS Consulting	340	18%	401	475	565	675	805	960	19%
- Education & Training	147	13%	166	192	225	260	300	350	16%
- Software Development	601	16%	697	815	1,000	1,180	1,381	1,615	18%
Systems Integration	165	11%	183	208	234	265	299	336	13%
- Equipment	47	6%	50	56	62	68	76	84	11%
- Software Products	4	14%	5	5	6	6	7	7	8%
- Professional Services	107	14%	122	140	158	180	203	230	14%
- Other	6	0%	6	7	9	10	12	15	20%
Outsourcing	237	11%	263	299	335	376	420	470	12%
- Platform Operations	128	10%	141	159	176	197	220	244	12%
- Applications Operations	109	12%	122	140	158	179	200	226	13%
Processing Services	201	10%	222	245	272	301	334	371	11%
- Transaction Processing	100	15%	115	132	152	175	201	231	15%
- Utility Processing	63	3%	65	66	69	70	71	72	2%
- Other Processing	38	11%	42	46	51	56	61	68	10%
Network Services	249	16%	290	339	397	465	547	640	17%
- Electronic Information Services	214	16%	248	290	340	398	468	548	17%
- Network Applications	36	18%	42	49	57	67	79	92	17%
Applications SW Products	669	18%	789	950	1,130	1,360	1,640	1,968	20%
Systems SW Products	447	15%	514	595	690	800	930	1,080	16%
Turnkey Systems	377	12%	423	477	542	615	696	795	13%
- Equipment	139	8%	150	162	175	190	205	220	8%
- Software Products	78	16%	91	105	122	140	161	190	16%
- Professional Services	160	14%	182	210	245	285	330	385	16%
Equipment Services	1,333	5%	1,400	1,470	1,544	1,621	1,702	1,787	5%
Grand Total	4,766	12%	5,348	6,065	6,934	7,918	9,052	10,373	14%

Source: INPUT

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Europe

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Market Profile

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France

Key Market Statistics 1997

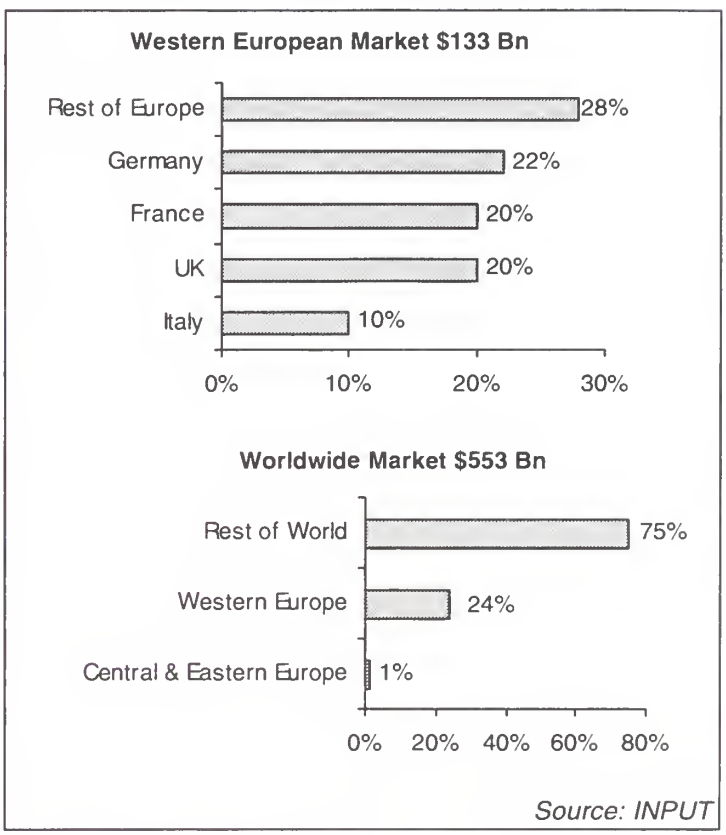
The French IT Software & Services market is the second largest in Europe, just ahead of the UK, due to exchange rate inequalities, see Exhibit 1.

Key Statistics for France are:

- Total IT Software & Services Market 1997 -$26 Billion (FF 135 bn)
- Internet/Intranet Services Market 1997 - $1.06 Billion (FF 5.5 bn)
- Total IT User Expenditure $68.5 Billion (FF 355 bn)
- GDP $1,480 Billion (FF 7,696 bn) and current growth forecast at 2.2%
- Workforce 26.5 million, 45% of the total population of 59 million.

Exhibit 1

IT Software & Services Markets 1997



Source: INPUT

Key Indicators

- The French IT Software & Services Market is estimated to represent 38% of all IT user expenditure.

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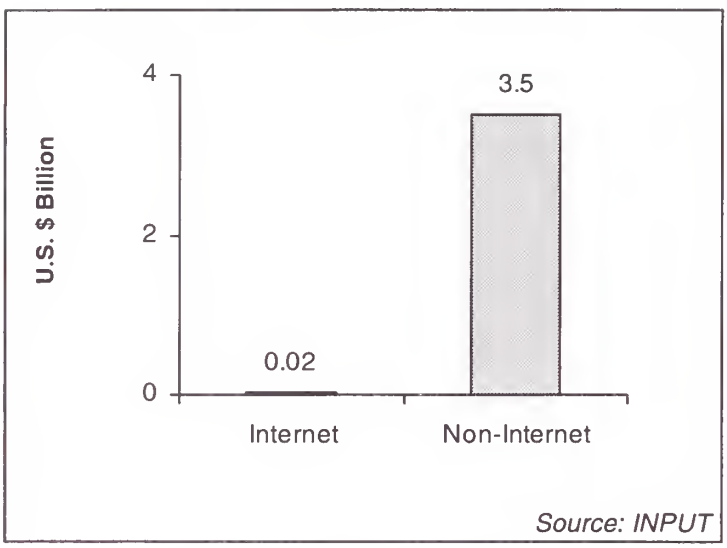
- The Internet /Intranet Services proportion is only expected to account for 4.1% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in France in 1997 is estimated to be about $9 billion (FF 47 bn) see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- France 1997

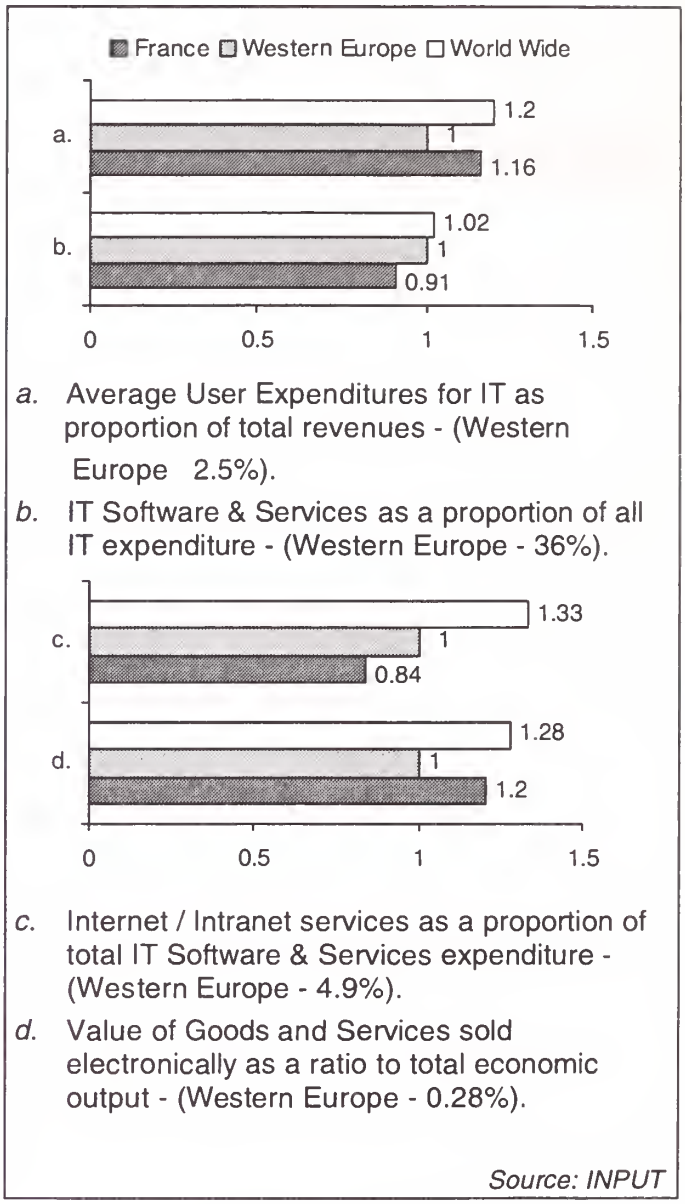


Source: INPUT

- Exhibit 3 shows comparative ratios for France, Western Europe and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for Western Europe.

Exhibit 3

Comparative Ratios for Electronic Business



a. Average User Expenditures for IT as proportion of total revenues - (Western Europe 2.5%).

b. IT Software & Services as a proportion of all IT expenditure - (Western Europe - 36%).

c. Internet / Intranet services as a proportion of total IT Software & Services expenditure - (Western Europe - 4.9%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (Western Europe - 0.28%).

Source: INPUT

Economic Context

The current status of the French economy is characterised by the following:

- *Economic growth:*
  – Official growth target for 1997, 2.5% and 2.8% targeted for 1998

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- *Employment:*
  - 45% of the French population is represented within the working population, against a European average of 55%.
  - Structure of employment in France is shown in Exhibit 4.

- *Unemployment:*
  – 11.9% level for 1996 is expected to decline to a slightly improved 11.6% in 1997

- - GDP deflators are estimated at:
  1996 1.2%
  1997 1%
  1998 1.4%

Exhibit 4

Employment Structure

	GDP%		Employment %	
	France	Europe	France	Europe
Agriculture	2.6	3.9	5	6.4
Industry	28.6	31.3	27	29.4
Services	68.8	64.8	69	63.8

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet services component are shown in Exhibit 5.

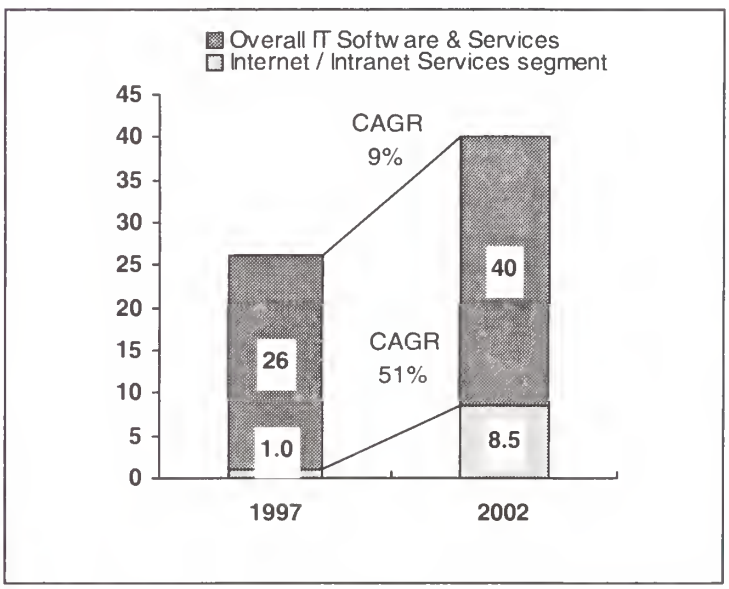
Forecasts for the nine principal categories of services expenditure in the French market are shown in Exhibit 6.

Exhibit 7 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category are provided in Exhibit 10.

Exhibit 5

IT Software & Services France 1997 - 2002



Source: INPUT

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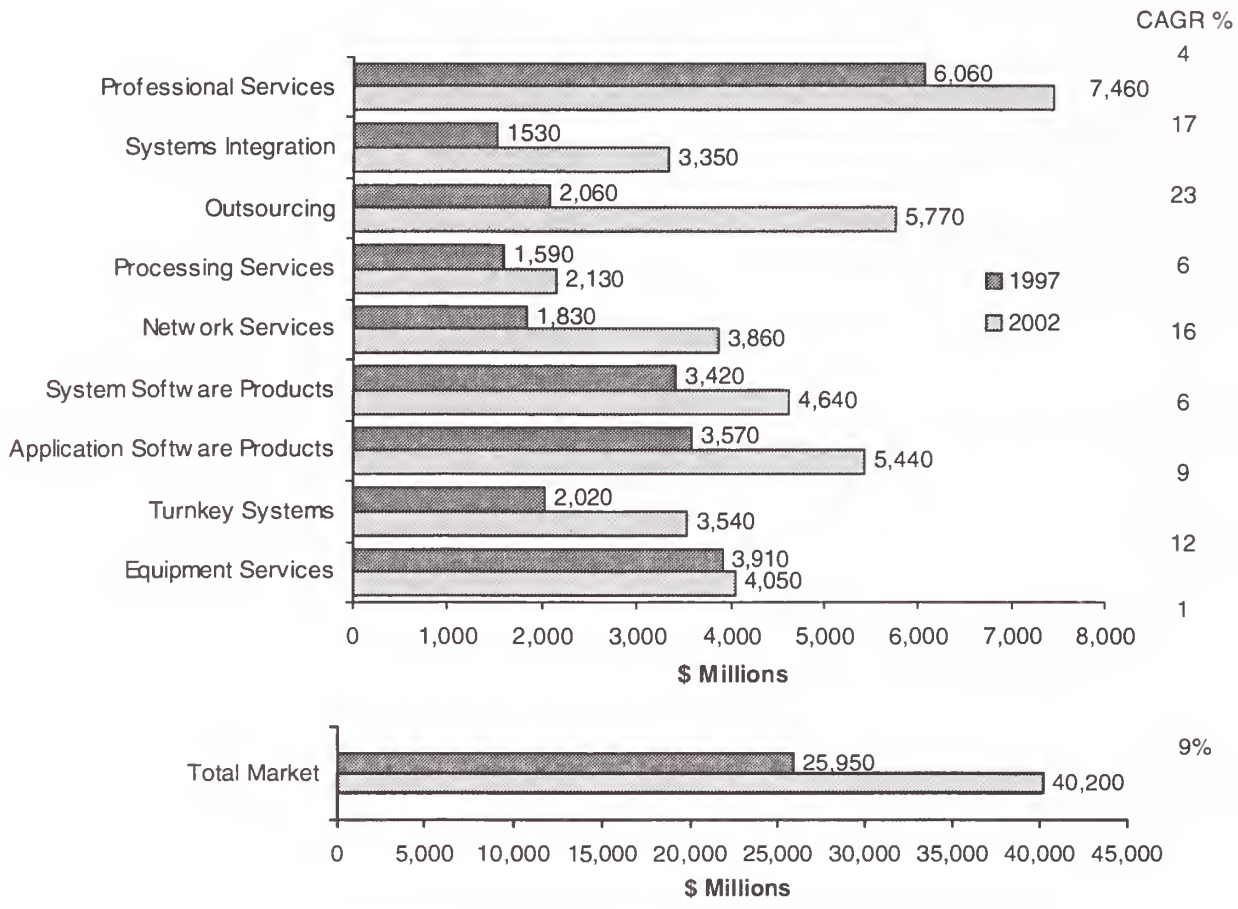
Exhibit 6

IT Software & Services Market Growth - France 1997 - 2002



Source: INPUT

Exhibit 7

Growth Rate Comparison of Product/Service Category

	France	Western Europe	Worldwide
Outsourcing	23	23	20
Systems Integration	17	17	17
Network Services	16	18	17
Turnkey Sysetems	12	13	13
Application Software Products	9	9	15
Processing Services	6	8	12
Systems Software Products	6	7	11
Professional Services	4	6	12
Equipment Services	1	2	2

Source: INPUT

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Exhibit 8 lists the leading Information Service vendors in France.

User Expenditures for IT

Exhibit 9 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 10 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 8

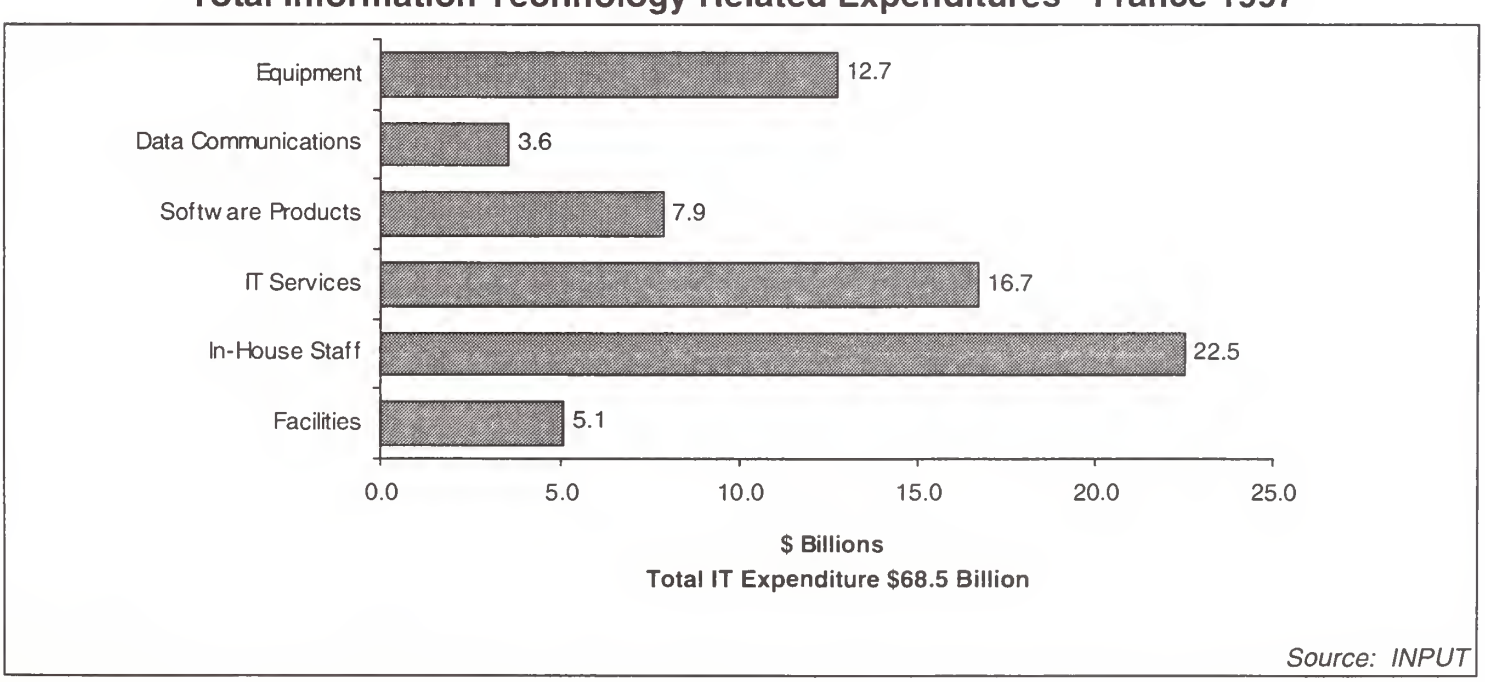
Leading IT Software & Services Vendors France 1996

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	IBM	U.S.	1,720	7.6
2	Bull	France	810	3.6
3	Cap Gemini Sogeti	France	627	2.8
4	Digital	U.S.	419	1.8
5	Sligos	France	386	1.7
6	EDS	U.S.	368	1.7
7	Microsoft	U.S.	354	1.6
8	Axime	France	347	1.5
9	Reuters	U.K.	323	1.4
10	Syseca	France	317	1.4

Source: INPUT

Exhibit 9

Total Information Technology Related Expenditures - France 1997



Source: INPUT

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Exhibit 10

IT Software & Services Market
Forecast by Product/Service Category France, 1997-2002

Delivery Modes	U.S. $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	5,865	3	6,060	6,310	6,615	6,940	7,175	7,460	4
- IS Consulting	777	8	837	904	981	1,068	1,164	1,269	9
- Education & Training	628	7	672	726	777	832	882	944	7
- Custom Software	4,460	2	4,550	4,685	4,865	5,040	5,135	5,240	3
Systems Integration	1,298	18	1,529	1,808	2,144	2,500	2,885	3,346	17
- Equipment	306	10	337	375	423	471	519	568	11
- Application Software	254	21	308	385	481	596	712	865	23
- System Software	101	14	115	135	160	190	223	260	18
- Professional Services	613	20	735	875	1,041	1,196	1,375	1,581	17
- Other	26	17	31	37	42	49	58	68	17
Outsourcing	1,577	30	2,058	2,716	3,383	4,069	4,873	5,769	23
- Platform Operations	356	25	446	556	640	735	808	891	15
- Application Operations	658	25	823	1,069	1,283	1,475	1,696	1,918	18
- Desktop Services	125	40	175	237	308	385	481	600	28
- Application Management	179	40	250	327	440	550	687	858	28
- Network Management	260	40	364	527	712	925	1,202	1,504	33
Processing Services	1,529	4	1,587	1,654	1,760	1,875	1,991	2,125	6
- Transaction Processing	1,281	3	1,318	1,366	1,452	1,539	1,625	1,731	6
- Utility Processing	68	0	68	69	69	71	73	75	2
- Other Processing	176	12	197	219	241	265	292	320	10
Network Services	1,607	14	1,832	2,133	2,502	2,914	3,354	3,860	16
- Electronic Info Services	981	14	1,096	1,250	1,443	1,664	1,904	2,193	15
- Network Applications	626	18	736	883	1,060	1,250	1,450	1,668	18
System Software	3,230	6	3,425	3,615	3,825	4,075	4,345	4,635	6
- Mainframe	1,196	0	1,193	1,193	1,202	1,231	1,260	1,298	2
- Minicomputer	1,068	5	1,125	1,173	1,241	1,318	1,394	1,481	6
- Workstation/PC	973	13	1,100	1,243	1,379	1,531	1,684	1,852	11
Application Software	3,210	11	3,575	3,960	4,385	4,730	5,075	5,440	9
- Mainframe	165	-4	159	154	151	148	145	143	-2
- Minicomputer	863	3	889	937	1,012	1,071	1,099	1,128	5
- Workstation/PC	2,195	15	2,520	2,875	3,220	3,510	3,825	4,170	11
Turnkey Systems	1,981	2	2,019	2,212	2,462	2,789	3,154	3,539	12
- Equipment	942	1	952	1,010	1,096	1,202	1,327	1,443	9
- Application Software	490	6	519	568	644	750	866	991	14
- System Software	40	2	40	44	50	58	66	74	13
- Professional Services	511	1	516	583	669	777	900	1,035	15
Equipment Services	3,940	-1	3,910	3,915	3,975	4,015	4,050	4,055	1
- Equipment Maintenance	2,195	-6	2,065	1,940	1,845	1,735	1,630	1,515	-6
- Environmental Services	1,740	6	1,845	1,975	2,135	2,285	2,420	2,540	7
Grand Total	24,250	7	25,950	28,250	30,950	33,850	36,900	40,200	9

Source: INPUT

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Market Profile

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Germany

Key Market Statistics 1997

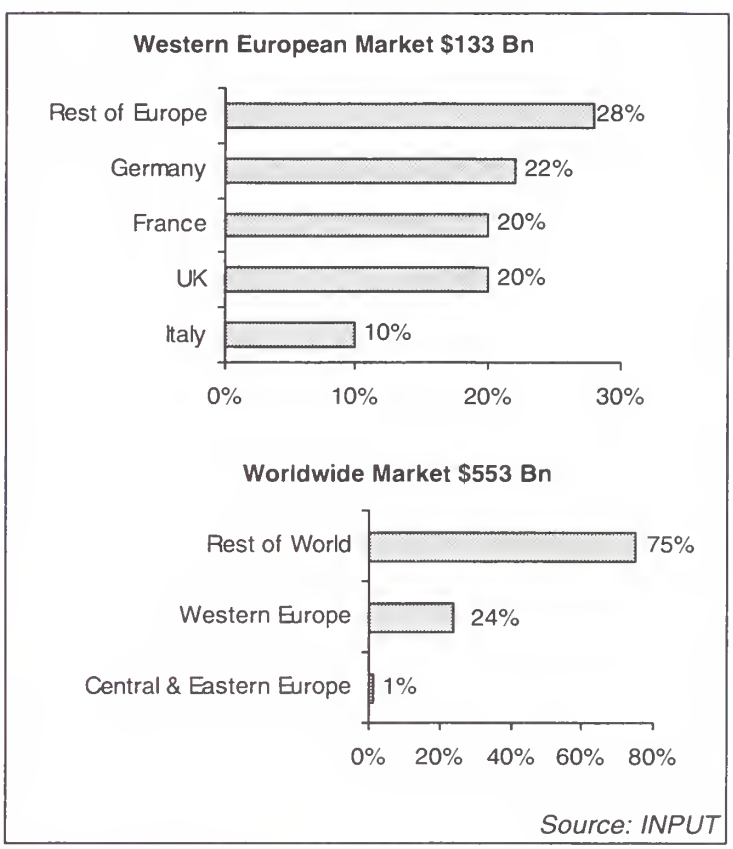
The German IT Software & Services market is the largest in Europe, see Exhibit 1.

Key Statistics for Germany are:

- Total IT Software & Services Market 1997 -$29 Billion (DM 45 bn)
- Internet/Intranet Services Market 1997 - $1.8 Billion (DM 2.7 bn)
- Total IT User Expenditure $86.6 Billion (DM 133 bn)
- GDP $1,452 Billion (DM 2,236 bn) and current growth forecast at 2.2%
- Workforce 40.3 million, 49.1% of the total population of 82 million.

Exhibit 1

IT Software & Services Markets 1997



Source: INPUT

Key Indicators

- The German IT Software & Services Market is estimated to represent 33% of all IT user expenditure.

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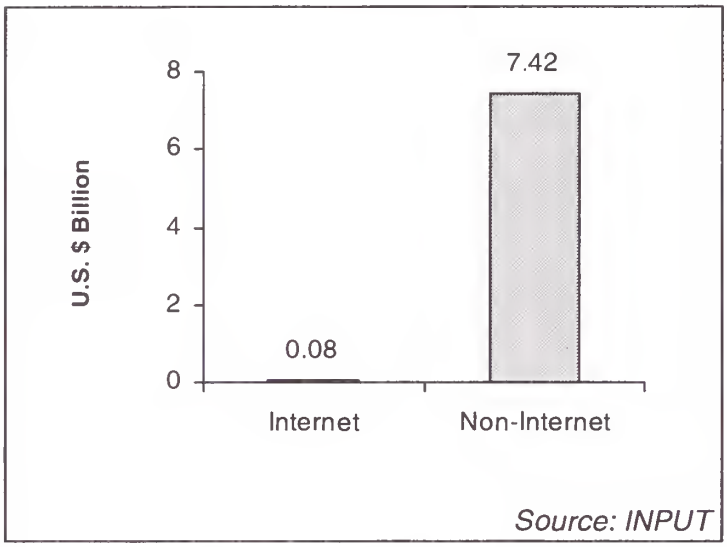
- The Internet /Intranet Services proportion is expected to account for 6.2% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in Germany in 1997 is estimated to be about $7.5 billion (DM 11.6 bn), see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- Germany 1997

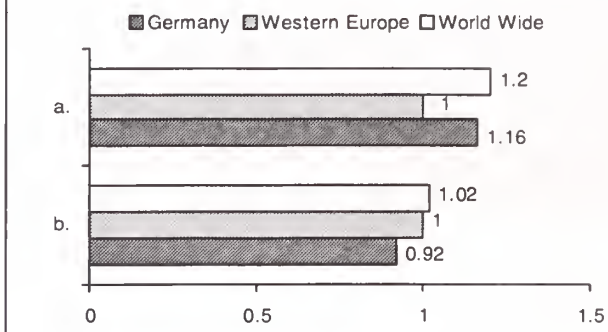


Source: INPUT

- Exhibit 3 shows comparative ratios for Germany, Western Europe and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for Western Europe.

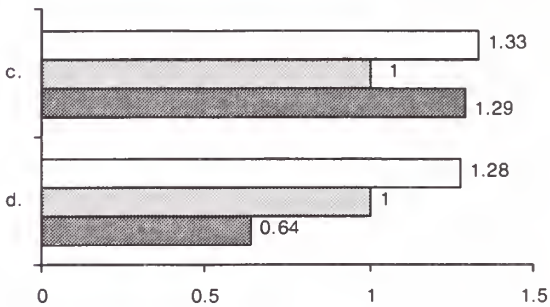
Exhibit 3

Comparative Ratios for Germany



a. Average User Expenditures for IT as proportion of total revenues - (Western Europe 2.5%).

b. IT Software & Services as a proportion of all IT expenditure - (Western Europe - 36%).



c. Internet / Intranet services as a proportion of total IT Software & Services expenditure - (Western Europe - 4.9%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (Western Europe - 0.28%).

Source: INPUT

Economic Context

The current status of the German economy is characterised by the following:

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- *Economic growth:*
  – Official growth target for 1997, 2.2% and 2.8% targeted for 1998
  – Rate of growth inhibited by the controls for entry into Maastricht and large transfer payments to Eastern Germany.
  – Growth will be stimulated by improving export prospects as currency appreciation is reversed.
  – Overall growth rate in 1996 of 1% is largely accounted for by Eastern Germany's subsidised 3% growth rate.

- *Employment:*
  - 49.1% of the German population is represented within the working population, against a European average of 55%.
  - Structure of employment in Germany is shown in Exhibit 4.

- *Unemployment:*
  – 10% level is expected to continue throughout 1997 and 1998
  – Eastern Germany now has an unemployment rate of 20%
  – Tax reforms are expected to stimulate employment prospects into 1998 through improved export conditions and increased internal consumption.

- - GDP deflators are estimated at:

1996	1%
1997	1.2%
1998	1.1%

Exhibit 4

Employment Structure

	GDP%		Employment %	
	Germany	Europe	Germany	Europe
Agriculture	1	3.9	3	6.4
Industry	34.2	31.3	36	29.4
Services	64.8	64.8	61	63.8

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet services component are shown in Exhibit 5.

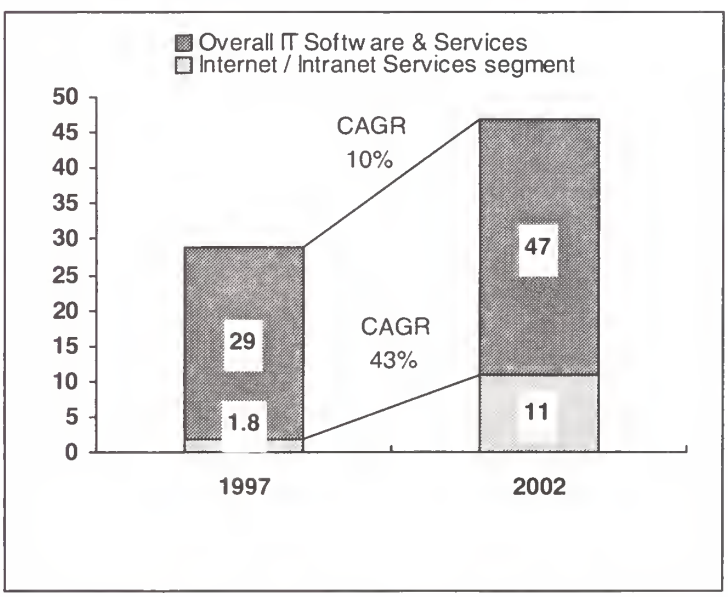
Forecasts for the nine principal categories of information services expenditure in the German market are shown in Exhibit 6.

Exhibit 7 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category are provided in Exhibit 10.

Exhibit 5

IT Software & Services Germany 1997 - 2002



Source: INPUT

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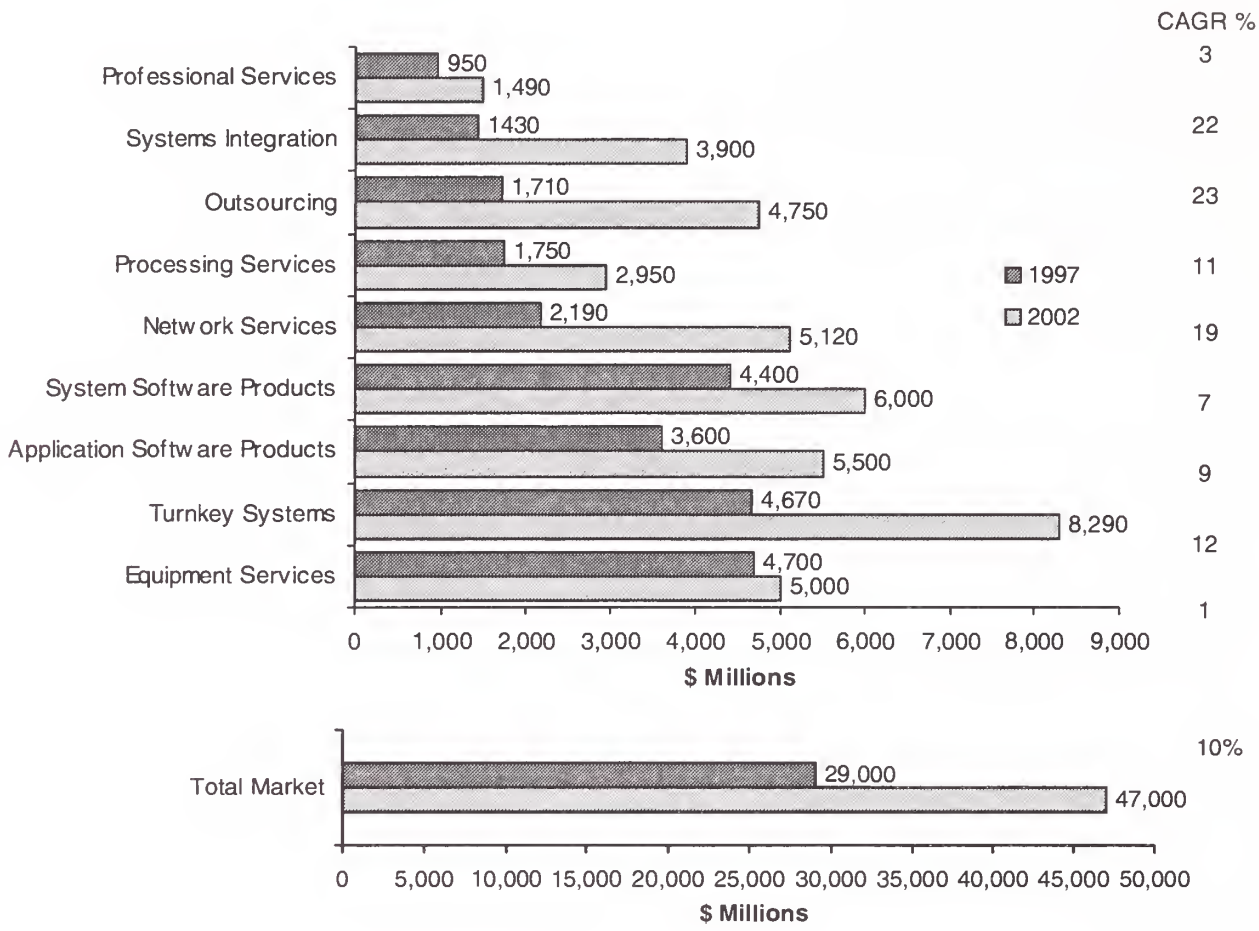
Exhibit 6

IT Software & Services Market Growth - Germany 1997 - 2002



Source: INPUT

Exhibit 7

Growth Rate Comparison of Product/Service Category

	Germany	Western Europe	Worldwide
Outsourcing	23	23	20
Systems Integration	22	17	17
Network Services	19	18	17
Turnkey Systems	12	13	13
Processing Services	11	8	12
Application Software Products	9	9	15
Systems Software Products	7	7	11
Professional Services	3	6	12
Equipment Services	1	2	2

Source: INPUT

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Exhibit 8 lists the leading Information Service vendors in Germany.

User Expenditures for IT

Exhibit 9 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 10 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 8

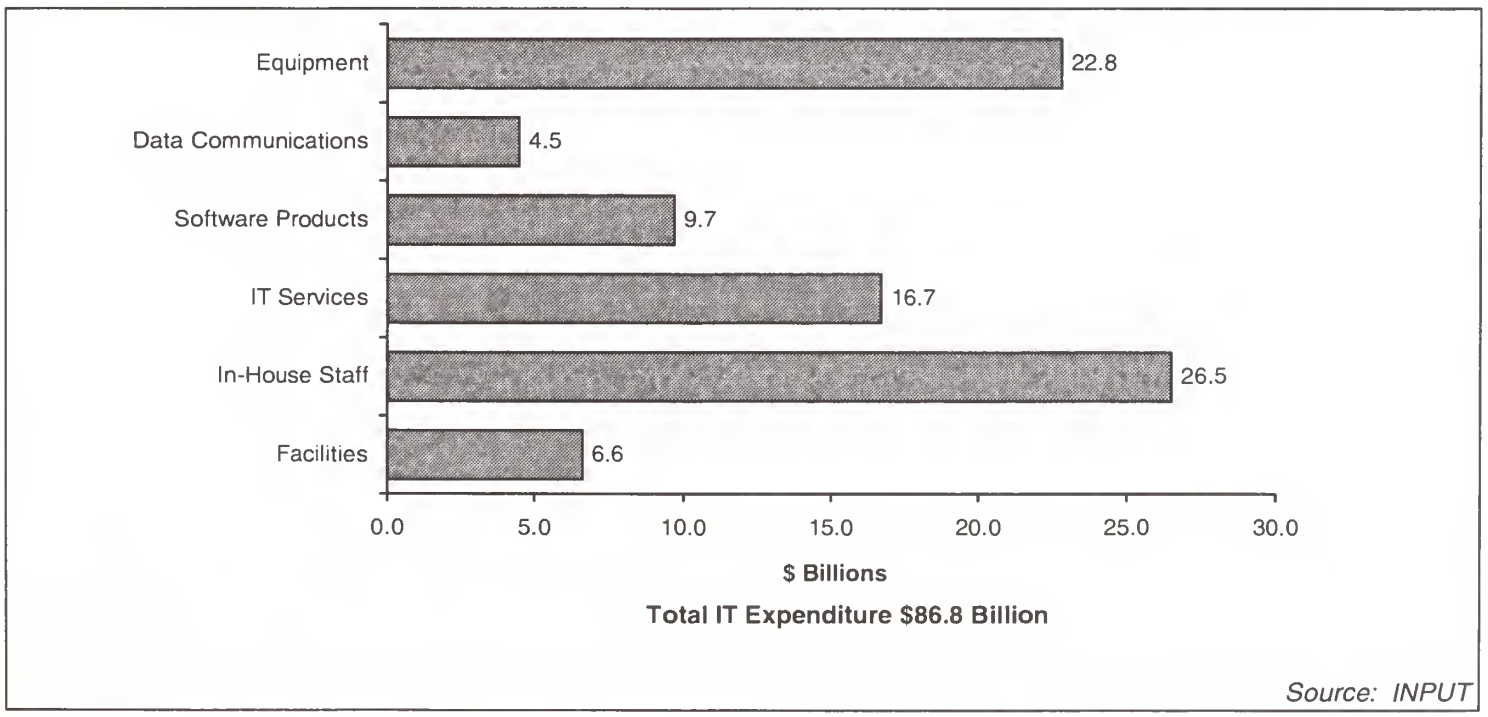
Leading IT Software & Services Vendors Germany 1996

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	IBM	U.S.	3,365	13
2	SNI	Germany	2,320	8.9
3	Debis Systemhaus	Germany	910	3.5
4	Datev	Germany	640	2.5
5	Digital	U.S.	636	2.5
6	SAP	Germany	590	2.3
7	EDS	U.S.	560	2.1
8	Hewlett Packard	U.S.	450	1.7
9	Reuters	U.K.	395	1.5
10	Microsoft	U.S.	375	1.4

Source: INPUT

Exhibit 9

Total Information Technology Related Expenditures - Germany 1997



Source: INPUT

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Exhibit 10

IT Software & Services Market
Forecast by Product/Service Category Germany, 1997-2002

Delivery Modes	U.S. $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	4,200	3	4,400	4,500	4,600	4,700	4,900	5,100	3
- IS Consulting	890	7	950	1,040	1,140	1,260	1,370	1,490	9
- Education & Training	980	6	1,040	1,140	1,230	1,330	1,430	1,530	8
- Custom Software	2,400	-2	2,300	2,300	2,200	2,200	2,100	2,000	-3
Systems Integration	1,140	26	1,430	1,790	2,180	2,690	3,250	3,900	22
- Equipment	240	4	250	280	310	370	430	490	14
- Application Software	231	17	269	347	458	601	782	1,000	30
- System Software	78	25	97	120	149	182	221	266	22
- Professional Services	530	47	770	980	1,210	1,470	1,770	2,080	22
- Other	45	0	45	49	52	55	58	65	7
Outsourcing	1,310	31	1,710	2,230	2,800	3,390	4,030	4,750	23
- Platform Operations	260	23	320	380	430	470	520	550	12
- Application Operations	650	33	860	1,100	1,380	1,660	1,920	2,230	21
- Desktop Services	143	30	185	250	325	422	519	649	29
- Application Management	156	33	208	286	370	455	584	714	28
- Network Management	100	34	140	200	290	390	490	600	34
Processing Services	1,590	10	1,750	1,950	2,240	2,500	2,690	2,950	11
- Transaction Processing	1,290	11	1,430	1,590	1,820	2,050	2,210	2,400	11
- Utility Processing	60	0	60	70	70	70	70	70	3
- Other Processing	230	14	270	300	340	380	430	480	12
Network Services	1,850	18	2,190	2,580	3,060	3,650	4,340	5,120	19
- Electronic Info Services	1,090	14	1,240	1,430	1,640	1,920	2,260	2,650	16
- Network Applications	760	24	940	1,160	1,420	1,730	2,080	2,470	21
System Software	4,000	8	4,400	4,700	5,000	5,400	5,700	6,000	7
- Mainframe	1,690	0	1,690	1,720	1,750	1,820	1,850	1,880	2
- Minicomputer	1,140	8	1,230	1,330	1,430	1,530	1,590	1,690	6
- Workstation/PC	1,160	24	1,440	1,640	1,810	2,030	2,250	2,500	12
Application Software	3,200	12	3,600	4,000	4,400	4,700	5,100	5,500	9
- Mainframe	250	-3	240	240	230	220	220	210	-3
- Minicomputer	880	10	970	1,060	1,150	1,250	1,370	1,490	9
- Workstation/PC	2,000	17	2,400	2,800	3,000	3,300	3,500	3,800	10
Turnkey Systems	4,460	5	4,670	5,190	5,830	6,600	7,340	8,290	12
- Equipment	2,020	0	2,010	2,140	2,310	2,470	2,630	2,950	8
- Application Software	930	9	1,010	1,170	1,360	1,660	1,920	2,180	17
- System Software	292	16	338	380	422	461	500	539	10
- Professional Services	1,230	7	1,310	1,500	1,740	2,020	2,300	2,620	15
Equipment Services	4,800	-1	4,700	4,700	4,800	4,800	4,900	5,000	1
- Equipment Maintenance	2,600	-7	2,400	2,300	2,200	2,100	2,000	1,900	-5
- Environmental Services	2,200	6	2,300	2,500	2,600	2,800	2,900	3,100	6
Grand Total	27,000	7	29,000	32,000	35,000	38,000	42,000	47,000	10

Source: INPUT

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Italy

Key Market Statistics 1997

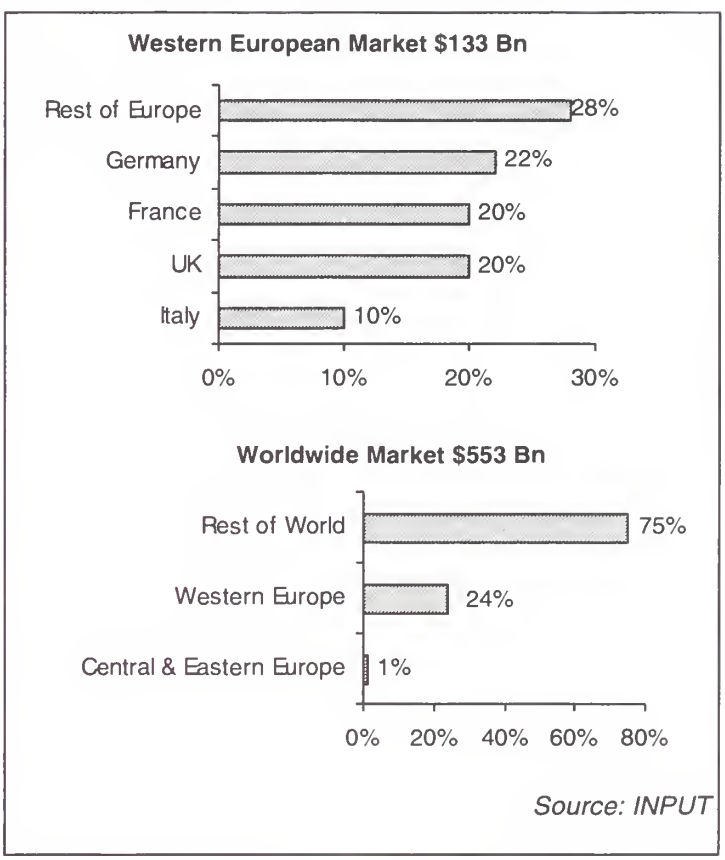
The Italian IT Software & Services market is the fourth largest in Europe, see Exhibit 1.

Key Statistics for Italy are:

- Total IT Software & Services Market 1997 -$13.0 Billion (19.5 Tr. lire)
- Internet/Intranet Services Market 1997 - $0.52 Billion (0.79 Tr. lire)
- Total IT User Expenditure $31.6 Billion (48 Tr. lire)
- GDP $1,132 Billion (1,721Tr. lire) and current growth forecast at 1%
- Workforce 24 million, 42% of the total population of 57 million.

Exhibit 1

IT Software & Services Markets 1997



Key Indicators

- The IT Software & Services Market is estimated to represent just over 41% of all IT user expenditure.

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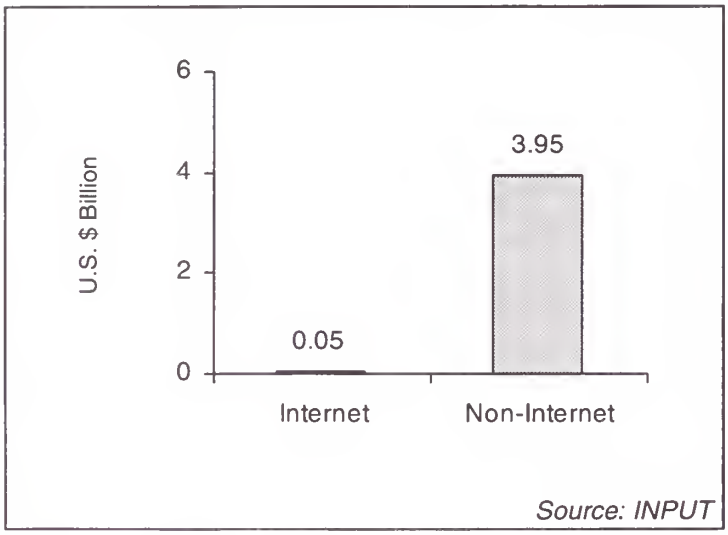
- The Internet /Intranet Services proportion, although growing rapidly, is only expected to account for 4.1% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in Italy in 1997 is estimated to be about $4 billion (6 Tr. Lire), almost entirely generated by EDI services, see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- Italy 1997

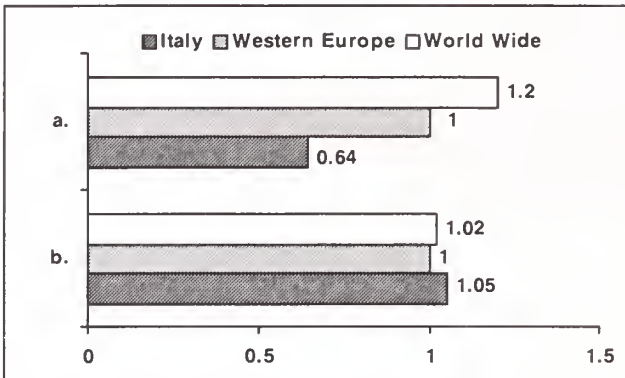


Source: INPUT

- Exhibit 3 shows comparative ratios for Italy, Western Europe and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for Western Europe.

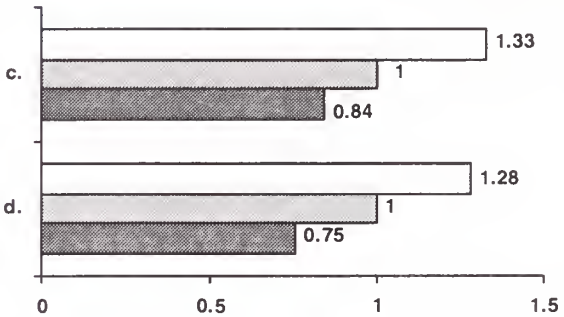
Exhibit 3

Comparative Ratios for Electronic Business



a. Average User Expenditures for IT as proportion of total revenues - (Western Europe 2.5%).

b. IT Software & Services as a proportion of all IT expenditure - (Western Europe - 36%).



c. Internet / Intranet services as a proportion of total IT Software & Services expenditure - (Western Europe - 4.9%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (Western Europe - 0.28%).

Source: INPUT

Economic Context

The current status of the Italian economy is characterised by the following:

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- *Economic growth:*
  – Official growth target for 1997, 1% and 1.8% targeted for 1998
  - Rate of growth limited by firm macroeconomic controls designed to meet Maastricht criteria (e.g. inter-alia to address Italy's mountain of debt estimated at about 120% of GDP, double the required criteria limit)
  – Italy well behind the recovery cycle of the French and German economies.

- *Employment:*
  - Only 42% of the Italian population is counted within the working population, against a European average of 55% - however note the presence of a very significant underground economy
  - Structure of employment in Italy is shown in Exhibit 4.

- *Unemployment:*
  -12.2% level not expected to change markedly in near term
  Significant difference between the export-oriented North and the public sector dependent South
  – Labour market situation heavily influenced by a very significant underground economy.

- *Inflation:*
  - Consumer price index changes estimated at:
  1997 3.0%
  1998 2.9%
  - Unit labour cost increases are estimated at:
  1996 4.7%
  1997 3.4%.
  - GDP deflators are estimated at:
  1996 4.5%
  1997 2.4%.

Exhibit 4

Employment Structure

	GDP%		Employment %	
	Italy	Europe	Italy	Europe
Agriculture	2.9	3.9	8	6.4
Industry	31.6	31.3	32	29.4
Services	65.5	64.8	60	63.8

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet services component are shown in Exhibit 5.

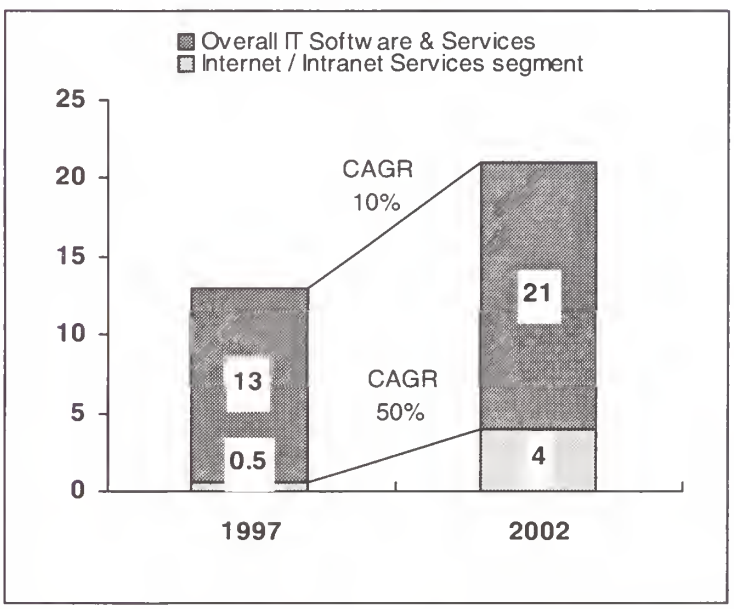
Forecasts for the nine principal categories of information services expenditure in the Italian market are shown in Exhibit 6.

Exhibit 7 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category are provided in Exhibit 10.

Exhibit 5

IT Software & Services Growth Italy 1997 - 2002



Source: INPUT

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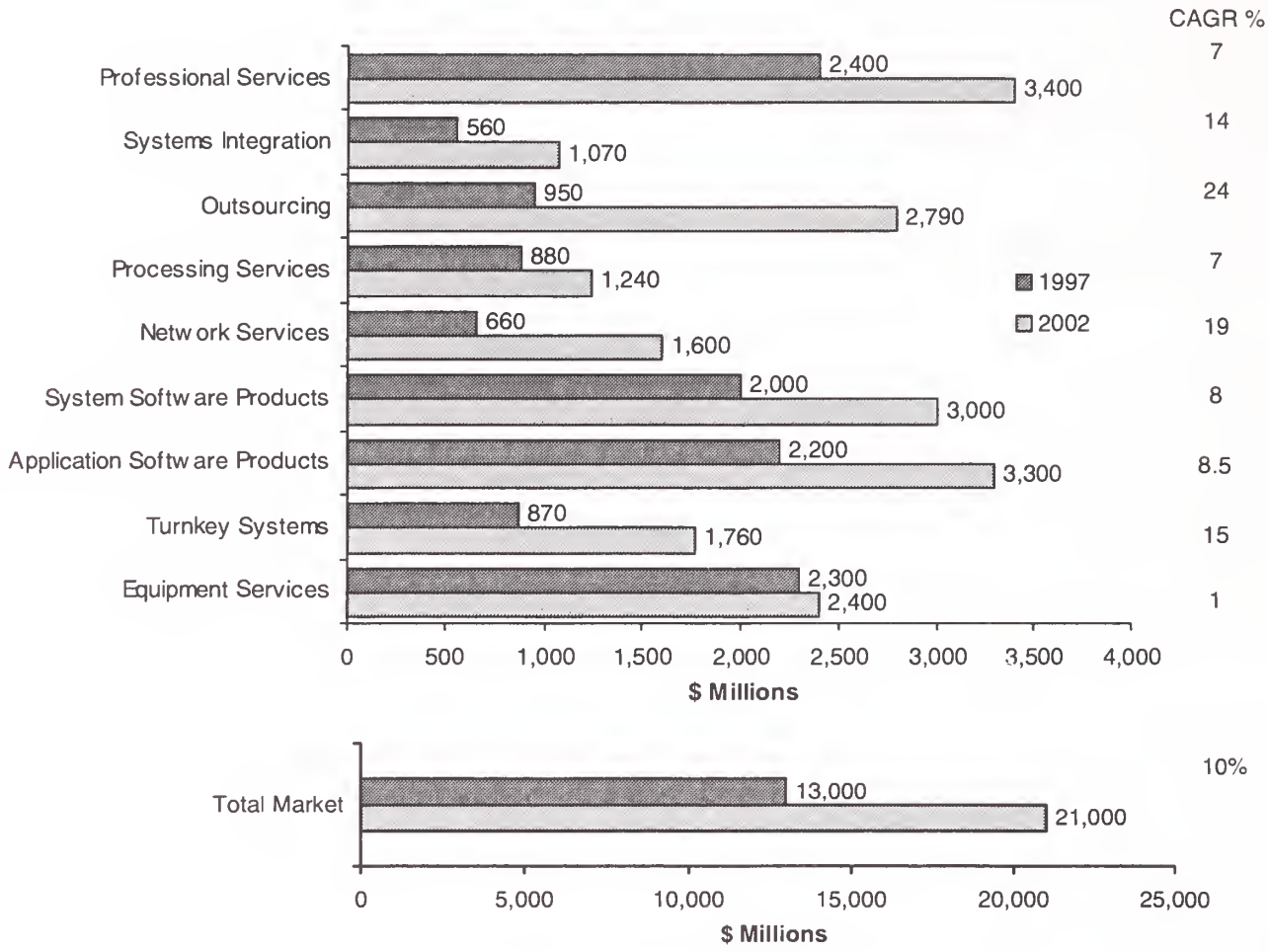
Exhibit 6

IT Software & Services Market Growth - Italy 1997 - 2002



Source: INPUT

Exhibit 7

Growth Rate Comparison of Product/Services Category

	Italy	Western Europe	Worldwide
Outsourcing	24	23	20
Network Services	19	18	17
Turnkey Systems	15	13	13
Systems Integration	14	17	17
Application Software Products	8.5	9	15
Systems Software Products	8	7	11
Processing Services	7	8	12
Professional Services	7	6	12
Equipment Services	1	2	2

Source: INPUT

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Exhibit 8 lists the leading Information Service vendors in Italy.

User Expenditures for IT

Exhibit 9 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 10 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 8

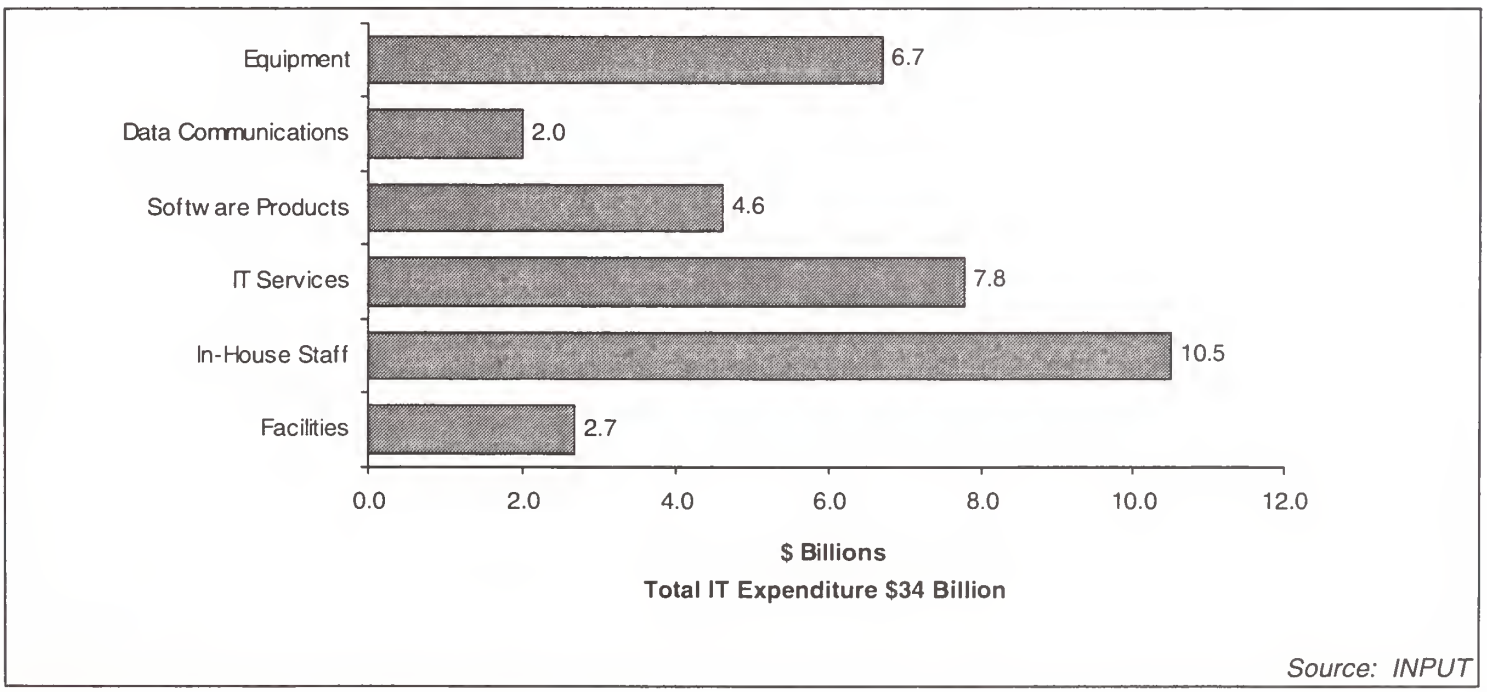
Leading IT Software & Services Vendors Italy 1996

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	IBM	U.S.	1,295	10
2	Finsiel	Italy	1,184	9.2
3	Olivetti	Italy	766	6.0
4	Digital	U.S.	263	2.1
5	Microsoft	U.S.	211	1.6
6	Andersen Consulting	U.S.	197	1.5
7=	EDS	U.S.	178	1.4
7=	Reuters	U.K.	178	1.4
9	Cerved	Italy	174	1.4
10	Bull	France	164	1.3

Source: INPUT

Exhibit 9

Total Information Technology Related Expenditures - Italy 1997



Source: INPUT

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Exhibit 10

IT Software & Services Market
Forecast by Product/Services Category Italy, 1997-2002

Delivery Modes	U.S. $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	2,400	3	2,400	2,600	2,800	3,000	3,200	3,400	7
- IS Consulting	450	11	500	570	660	780	910	1,060	16
- Education & Training	190	5	200	220	250	290	330	370	13
- Custom Software	1,700	2	1,700	1,800	1,800	1,900	1,900	2,000	3
Systems Integration	500	20	600	690	800	910	1,020	1,150	14
- Equipment	110	10	130	130	140	160	170	180	8
- Application Software	103	34	138	171	207	247	293	349	20
- System Software	36	20	43	49	56	63	69	76	12
- Professional Services	240	19	280	330	380	430	470	530	13
- Other	9	12	10	11	12	13	13	15	9
Outsourcing	720	32	950	1,230	1,570	1,910	2,300	2,790	24
- Platform Operations	220	30	280	340	390	450	490	560	15
- Application Operations	250	25	310	410	530	630	760	920	24
- Desktop Services	112	41	158	204	263	329	414	520	27
- Application Management	66	30	86	115	158	204	253	316	30
- Network Management	80	46	120	160	230	300	380	470	33
Processing Services	830	6	880	920	990	1,060	1,150	1,240	7
- Transaction Processing	720	5	760	800	850	910	980	1,060	7
- Utility Processing	10	0	10	10	10	10	20	20	5
- Other Processing	100	10	110	110	130	130	150	170	10
Network Services	570	17	660	780	930	1,120	1,340	1,600	19
- Electronic Info Services	320	10	360	390	440	490	550	610	11
- Network Applications	240	26	310	380	490	620	790	990	27
System Software	1,800	11	2,000	2,300	2,500	2,600	2,800	3,000	8
- Mainframe	540	1	550	560	570	580	590	600	2
- Minicomputer	580	9	630	690	750	810	870	940	8
- Workstation/PC	700	23	870	1,020	1,150	1,260	1,360	1,460	11
Application Software	1,900	16	2,200	2,500	2,700	2,900	3,100	3,300	8
- Mainframe	120	-5	110	110	100	100	90	90	-5
- Minicomputer	420	5	440	460	470	490	500	520	3
- Workstation/PC	1,400	21	1,700	2,000	2,100	2,300	2,500	2,700	10
Turnkey Systems	750	9	820	940	1,080	1,260	1,450	1,670	15
- Equipment	370	8	400	450	510	570	640	710	12
- Application Software	180	12	200	240	280	330	390	460	18
- System Software	16	11	17	20	23	27	31	35	15
- Professional Services	190	9	200	230	270	330	390	470	18
Equipment Services	2,300	0	2,300	2,400	2,400	2,400	2,400	2,400	1
- Equipment Maintenance	1,500	-1	1,400	1,400	1,400	1,300	1,300	1,200	-3
- Environmental Services	800	5	900	900	1,000	1,000	1,100	1,200	6
Grand Total	12,000	8	13,000	14,000	16,000	17,000	19,000	21,000	10

Source: INPUT

This Country Profile is issued as part of INPUT's World-Wide IT Software & Services Market Forecast Program. If you have questions or comments on this profile, please call your local INPUT organisation or Peter Lines at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, Tel: 650 961 3300 email: plines@input.com

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Market Profile

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United Kingdom

Key Market Statistics 1997

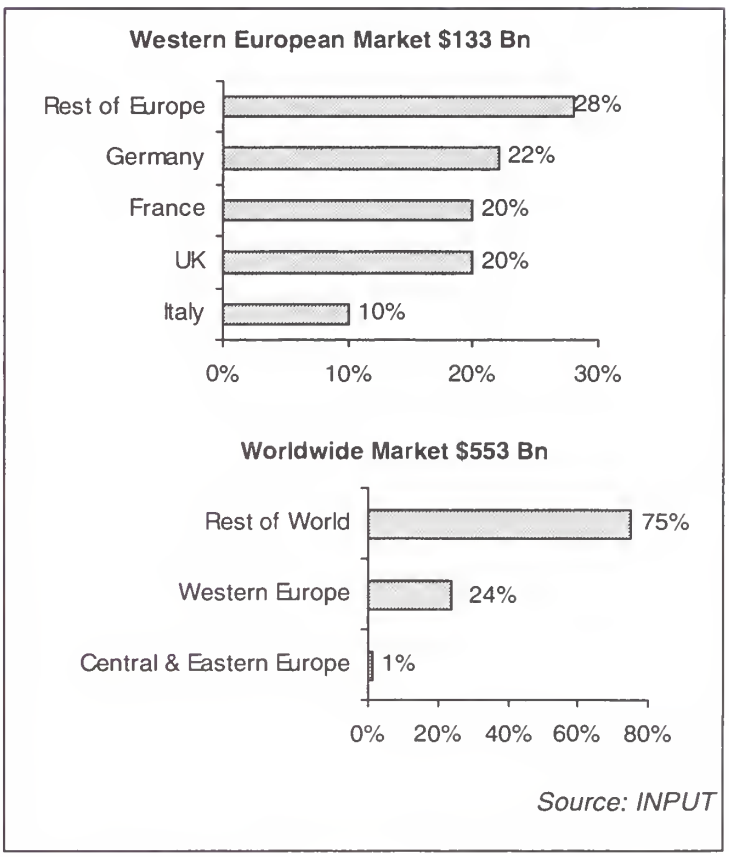
The UK IT Software & Services market is typically the third largest in Europe, although exchange rates this year puts it on roughly equal footing with France, see Exhibit 1.

Key Statistics for the United Kingdom are:

- Total IT Software & Services Market 1997 -$26 Billion (£ 15.2bn)
- Internet/Intranet Services Market 1997 - $1.6 Billion (£ 0.94 bn)
- Total IT User Expenditure $61.6 Billion (£ 36 bn)
- GDP $1,140 Billion (£ 666 bn) and current growth forecast at 3%
- Workforce 28 million, 49% of the total population of 58 million.

Exhibit 1

IT Software & Services Markets 1997



Source: INPUT

Key Indicators

- The UK IT Software & Services Market is estimated to represent 42% of all IT user expenditure.

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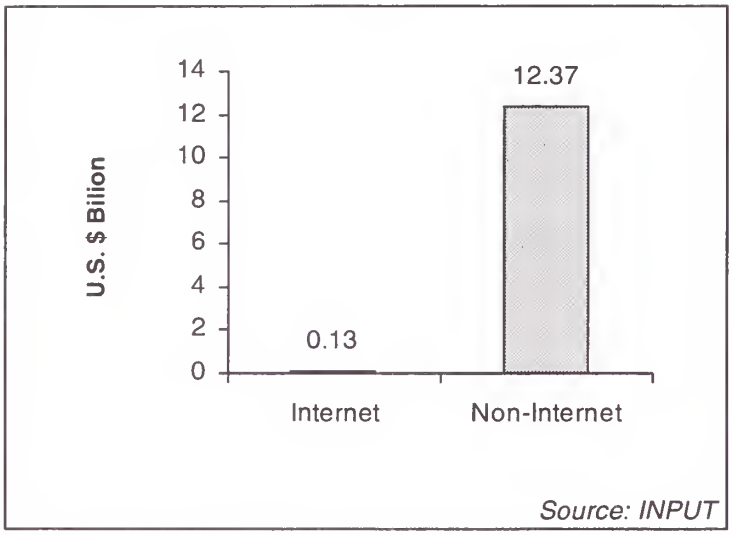
- The Internet /Intranet Services proportion is expected to account for a relatively advanced 6.2% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in the U.K. in 1997 is estimated to be about $12.5 billion (£7.3 bn), see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- United Kingdom 1997

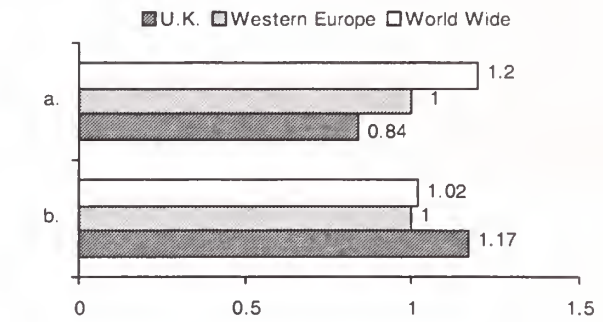


Source: INPUT

- Exhibit 3 shows comparative ratios for the U.K., Western Europe and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for Western Europe.
- The UK is well adapted to the use of online information services and is relatively advanced in Information Service penetration.

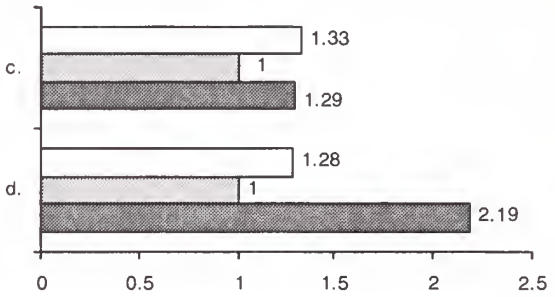
Exhibit 3

Comparative Ratios for Electronic Business



a. Average User Expenditures for IT as proportion of total revenues - (Western Europe 2.5%).

b. IT Software & Services as a proportion of all IT expenditure - (Western Europe - 36%).



c. Internet / Intranet services as a proportion of total IT Software & Services expenditure - (Western Europe - 4.9%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (Western Europe - 0.28%).

Source: INPUT

Economic Context

The current status of the UK economy is characterised by the following:

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- *Economic growth:*
  – Official growth targets
  1996 2.1%
  1997 3.0%
  1998 2.7%.
  – The U.K. assimilates 40% of direct investment from outside the European Union.
  – The United Kingdom has declined to enter the European Monetary Union in 1999, which may act to inhibit growth initially.

- *Employment:*
  - 49.4% of the U.K. population is represented within the working population, against a European average of 55%.
  - Structure of employment in the U.K. is shown in Exhibit 4.

- *Unemployment:*
  – 7.5% level for 1997 is expected to decline slightly into 1998
  – The decrease in the rate of unemployment has not had a significant effect on the long term unemployed (over 1 year), which remains at a 3% level.

- - GDP deflators are estimated at:
  1996 3.1%
  1997 2.3%
  1998 2.2%

Exhibit 4

Employment Structure

	GDP%		Employment %	
	U.K.	Europe	U.K.	Europe
Agriculture	1.7	3.9	2	6.4
Industry	27.7	31.3	26	29.4
Services	70.6	64.8	72	63.8

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet component are shown in Exhibit 5.

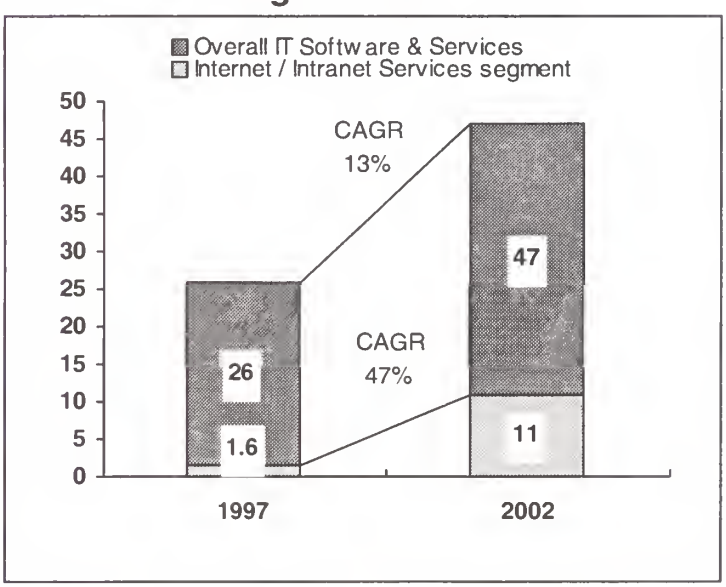
Forecasts for the nine principal categories of information services expenditure in the U.K. market are shown in Exhibit 6.

Exhibit 7 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category are provided in Exhibit 10.

Exhibit 5

IT Software & Services Growth United Kingdom 1997 - 2002



Source: INPUT

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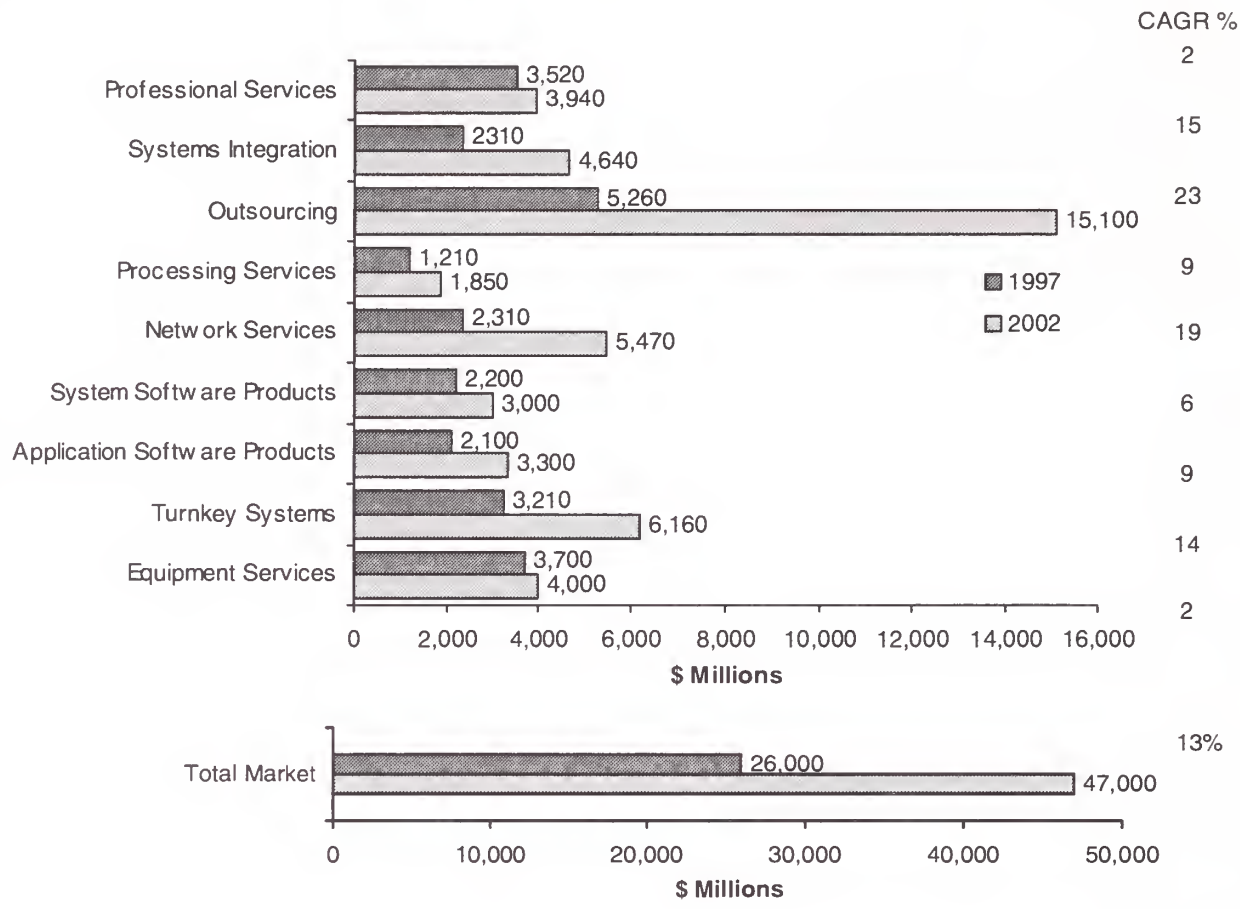
Exhibit 6

IT Software & Services Market Growth - United Kingdom 1997 - 2002



Source: INPUT

Exhibit 7

Growth Rate Comparison of Product/Service Category

	United Kingdom	Western Europe	Worldwide
Outsourcing	23	23	20
Systems Integration	15	17	17
Network Services	19	18	17
Turnkey Systems	14	13	13
Application Software Products	9	9	15
Processing Services	9	8	12
Systems Software Products	6	7	11
Professional Services	2	6	12
Equipment Services	2	2	2

Source: INPUT

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Exhibit 8 lists the leading Information Service vendors in Germany.

User Expenditures for IT

Exhibit 9 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 10 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 8

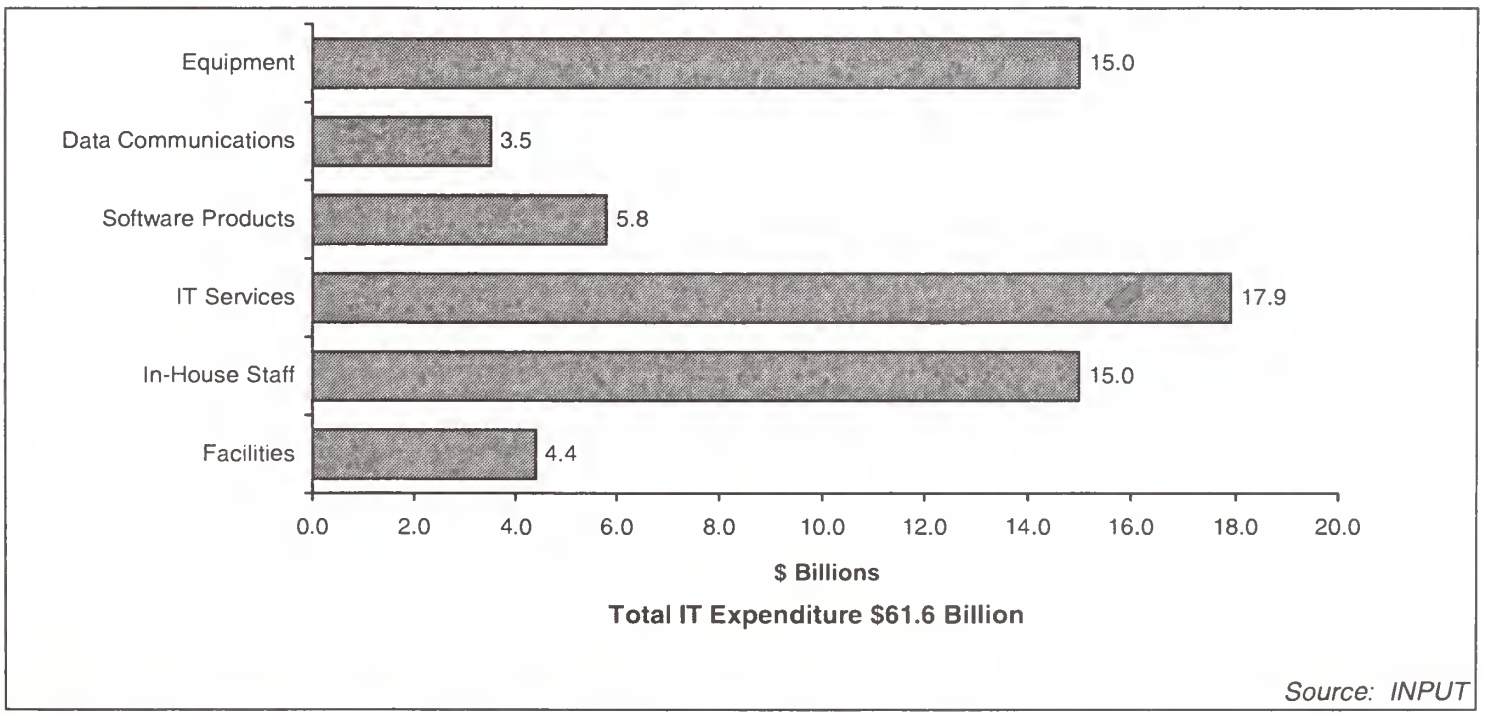
Leading IT Software & Services Vendors United Kingdom 1996

Rank	Vendor	Country of Origin	Estimated Sector Revenue ($ Millions)	Market Share (%)
1	IBM	U.S.	2,038	8.4
2	ICL	U.K.	1,275	5.2
3	EDS	U.S.	796	3.3
4	Digital	U.S.	650	2.7
5	Reuters	U.K.	574	2.4
6	Andersen Consulting	U.S.	548	2.3
7	Cap Gemini Sogeti	France	514	2.1
8	Microsoft	U.S.	445	1.6
9	CSC	U.S.	385	1.4
10	BT / Concert	U.K.	351	1.3

Source: INPUT

Exhibit 9

Total Information Technology Related Expenditures - United Kingdom 1997



Source: INPUT

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Exhibit 10

IT Software & Services Market
Forecast by Product/Service Category United Kingdom, 1997-2002

Delivery Modes	U.S. $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	3,420	3	3,520	3,640	3,730	3,820	3,870	3,940	2
- IS Consulting	920	12	1,030	1,170	1,310	1,460	1,590	1,740	11
- Education & Training	370	5	390	400	420	430	450	460	4
- Custom Software	2,100	-2	2,100	2,100	2,000	1,900	1,800	1,700	-4
Systems Integration	1,990	16	2,310	2,690	3,140	3,610	4,130	4,640	15
- Equipment	440	10	480	530	580	630	680	710	8
- Application Software	411	25	514	634	788	976	1,207	1,473	23
- System Software	137	13	154	180	214	248	283	325	16
- Professional Services	950	15	1,100	1,270	1,470	1,660	1,860	2,000	13
- Other	60	13	68	76	86	98	110	125	13
Outsourcing	4,060	30	5,260	6,990	8,780	10,630	12,840	15,100	23
- Platform Operations	600	14	680	790	890	990	1,110	1,200	12
- Application Operations	1,710	28	2,190	2,850	3,420	3,940	4,540	5,140	19
- Desktop Services	308	11	342	479	625	753	899	1,062	25
- Application Management	462	44	668	942	1,173	1,473	1,764	2,055	25
- Network Management	980	40	1,370	1,920	2,670	3,480	4,520	5,650	33
Processing Services	1,100	9	1,210	1,320	1,430	1,560	1,700	1,850	9
- Transaction Processing	800	6	850	900	960	1,020	1,080	1,140	6
- Utility Processing	30	0	30	30	30	30	30	40	5
- Other Processing	270	19	330	390	440	510	580	670	15
Network Services	1,950	18	2,310	2,770	3,270	3,880	4,600	5,470	19
- Electronic Info Services	1,340	16	1,550	1,820	2,120	2,480	2,900	3,400	17
- Network Applications	620	24	760	950	1,150	1,400	1,700	2,070	22
System Software	2,100	8	2,200	2,400	2,500	2,700	2,800	3,000	6
- Mainframe	790	1	800	810	820	830	840	850	1
- Minicomputer	680	10	750	820	890	960	1,040	1,120	8
- Workstation/PC	580	13	660	730	800	870	960	1,040	10
Application Software	1,900	15	2,100	2,400	2,600	2,900	3,100	3,300	9
- Mainframe	110	-6	100	100	90	90	90	80	-4
- Minicomputer	480	7	510	550	580	630	680	740	7
- Workstation/PC	1,300	20	1,500	1,800	1,900	2,100	2,300	2,500	10
Turnkey Systems	2,790	15	3,210	3,750	4,330	4,920	5,510	6,160	14
- Equipment	1,360	15	1,570	1,820	2,070	2,320	2,600	2,910	13
- Application Software	510	17	600	720	860	990	1,110	1,230	16
- System Software	214	12	240	274	308	342	377	411	11
- Professional Services	700	15	800	940	1,100	1,270	1,420	1,610	15
Equipment Services	3,700	0	3,700	3,700	3,700	3,800	3,900	4,000	2
- Equipment Maintenance	2,000	-7	1,900	1,700	1,600	1,500	1,400	1,200	-8
- Environmental Services	1,600	8	1,800	1,900	2,100	2,300	2,500	2,700	9
Grand Total	23,000	13	26,000	30,000	34,000	38,000	42,000	47,000	13

Source: INPUT

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Market Profile

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Russia

Key Market Statistics 1997

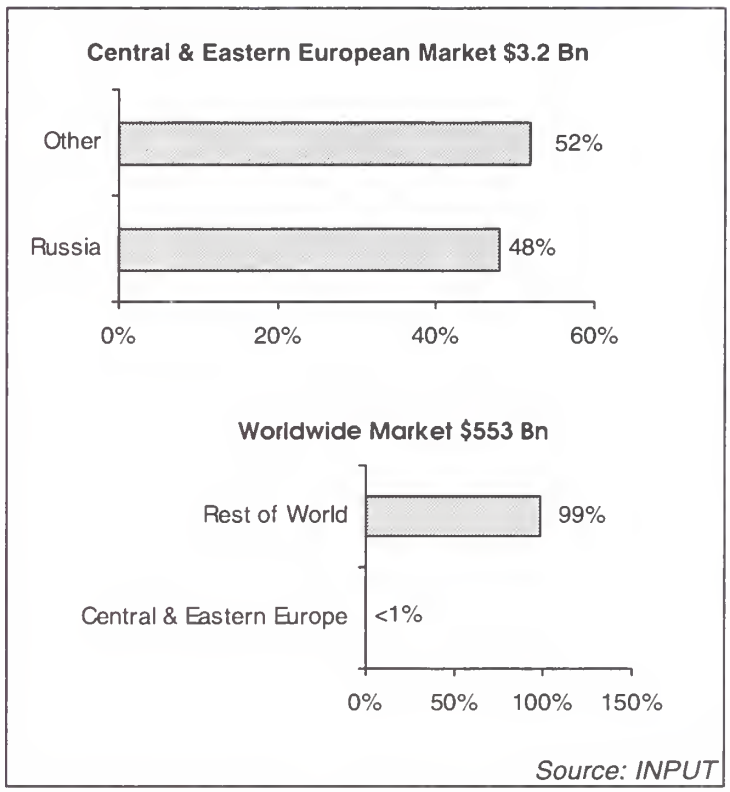
The Russian IT Software & Services market represents 48% of the Central & Eastern European market, its largest contributor, see Exhibit 1.

Key Statistics for Russia are:

- Total IT Software & Services Market 1997 - $1.52 Billion
- Internet/Intranet Services Market 1997 - $38 Million
- Total IT User Expenditure $5.6 Billion
- GDP $293 Billion and current growth forecast at 4% in 1998
- Workforce 85 million, 57% of the total population of 148 million.

Exhibit 1

IT Software & Services Markets 1997



Source: INPUT

Key Indicators

- The Russian IT Software & Services Market is estimated to represent 27% of all IT user expenditure.
- The Internet / Intranet Services proportion is expected to account for 2.5% of all IT Software & Services expenditure in 1997.

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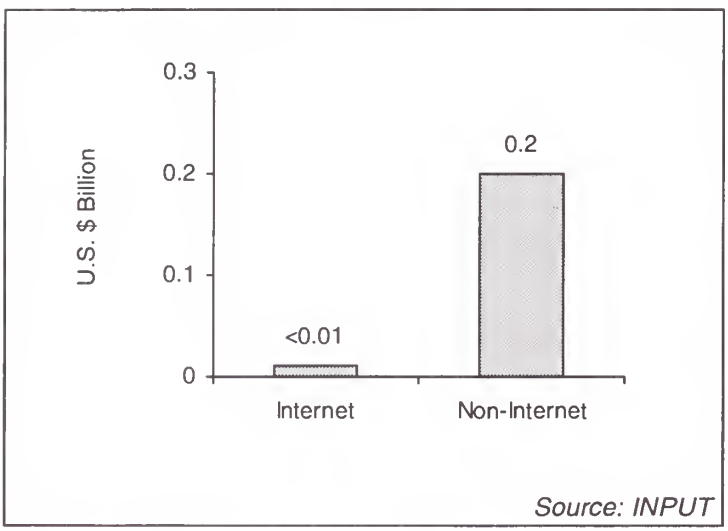
- The total value of goods and services sold electronically in Russia in 1997 is estimated to be about $200 million, see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- Russia 1997

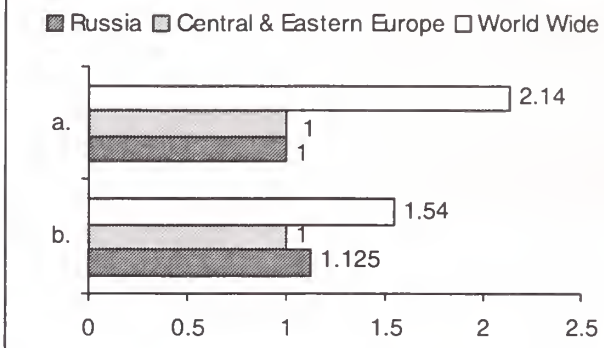


Source: INPUT

- Exhibit 3 shows comparative ratios for Russia, Central & Eastern Europe and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for Central & Eastern Europe.

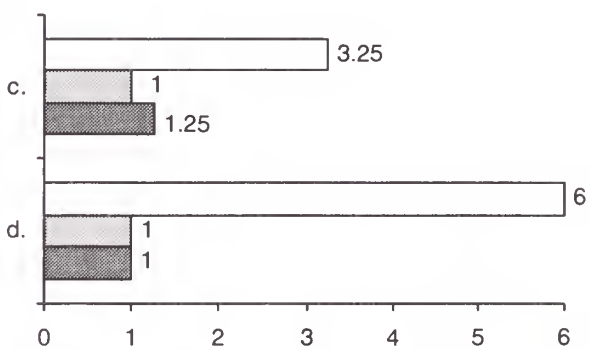
Exhibit 3

Comparative Ratios for Russia



a. Average User Expenditures for IT as proportion of total revenues - (Central & Eastern Europe - 1.4%).

b. Information Services as a proportion of all IT expenditure - (Central & Eastern Europe - 24%).



c. Internet / Intranet services as a proportion of total Information Services expenditure - (Central & Eastern Europe - 2%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (Central & Eastern Europe - 0.06%).

Source: INPUT

Economic Context

The current status of the Russian economy is characterised by the following:

- *Economic growth:*
  – 1% for 1997, 3 - 4% forecast for 1998.

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- *Employment:*
  - 57% of the Russian population is represented within the working population.

- *Unemployment:*
  –8.3% level for 1996.

- - Inflation forecast at 12% in 1998 (14% in 1997).

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and Internet / Intranet services component are shown in Exhibit 4.

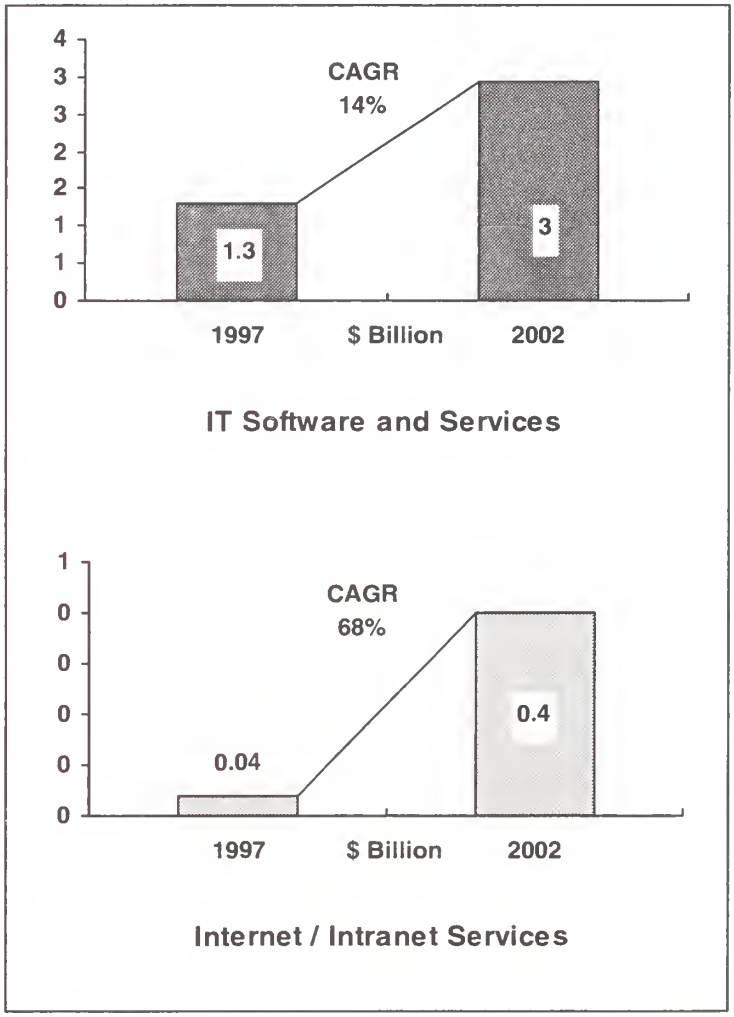
Forecasts for the nine principal categories of information services expenditure in the Russian market are shown in Exhibit 5.

Exhibit 6 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category is provided in Exhibit 8.

Exhibit 4

IT Software & Services Growth Russia 1997 - 2002



Source: INPUT

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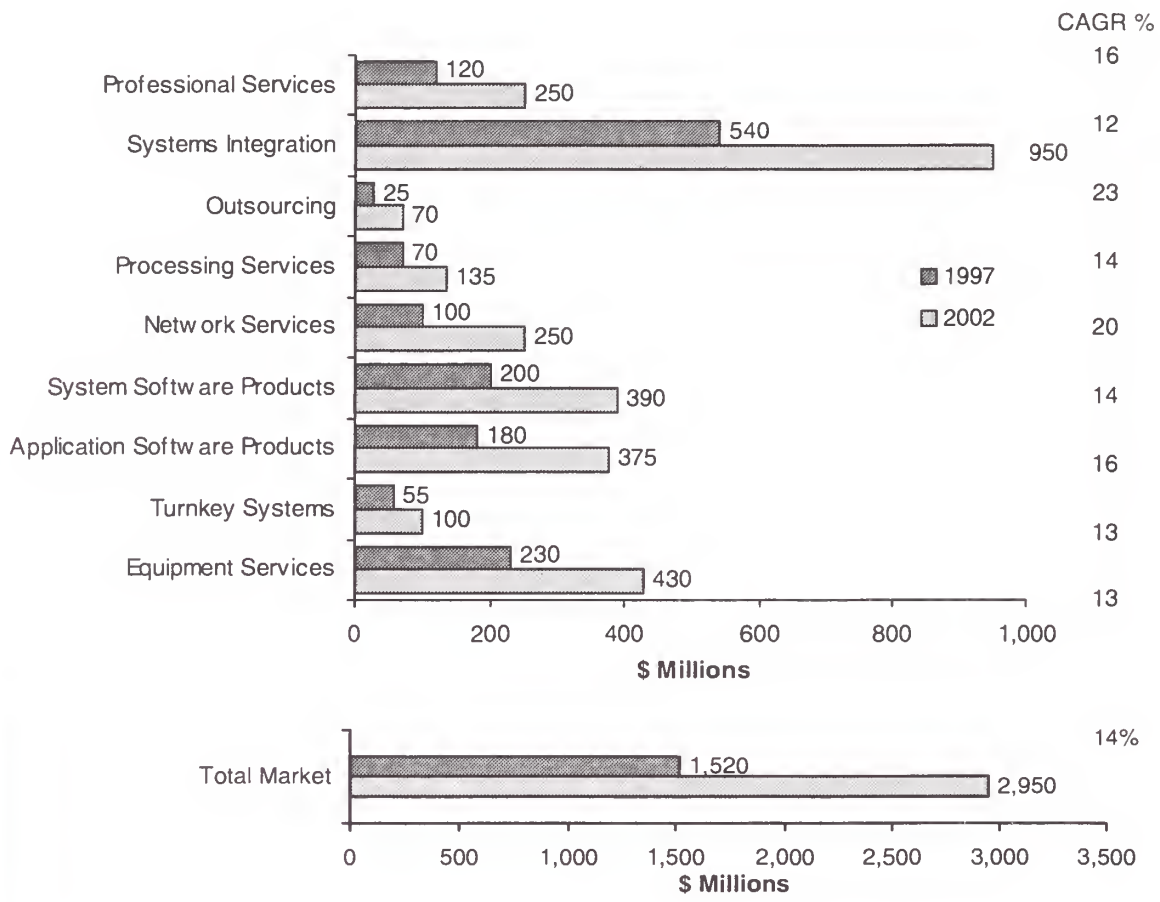
Exhibit 5

IT Software & Services Market Growth - Russia 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Services Category

	Russia	C & E Europe	Worldwide
Outsourcing	23	21	20
Network Services	20	19	17
Application Software Products	14	16	15
Professional Services	16	17	12
Systems Integration	12	13	17
Systems Software Products	16	16	11
Processing Services	14	13	12
Turnkey Systems	13	15	13
Equipment Services	13	14	2

Source: INPUT

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User Expenditures for IT

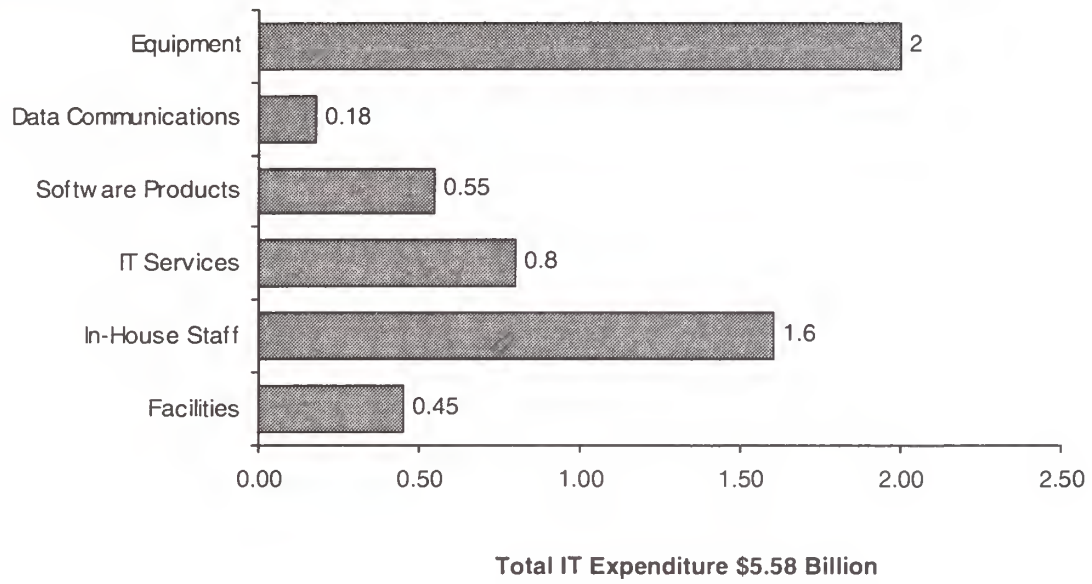
Exhibit 7 provides an assessment of all user expenditures on IT including internal staff and facilities.

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 8 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 7

Total Information Technology Related Expenditures - Russia 1997



Source: INPUT

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Exhibit 8

IT Software & Services Market
Forecast by Product/Services Category Russia, 1997-2002

Delivery Modes	US $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	105	14%	120	140	160	185	215	250	16%
Systems Integration	460	17%	538	605	680	760	850	950	12%
Outsourcing	20	25%	25	30	37	45	55	70	23%
Processing Services	60	17%	70	80	90	105	120	135	14%
Network Services	80	25%	100	120	145	175	210	250	20%
Applications SW Products	160	25%	200	230	260	295	335	390	14%
Systems SW Products	150	20%	180	210	245	285	330	375	16%
Turnkey Systems	45	22%	55	62	70	80	90	100	13%
Equipment Services	205	12%	230	260	295	335	380	430	13%
Grand Total	1,285	18%	1,518	1,737	1,982	2,265	2,585	2,950	14%

Source: INPUT

This Country Profile is issued as part of INPUT's World-Wide IT Software & Services Market Forecast Program. If you have questions or comments on this profile, please call your local INPUT organisation or Peter Lines at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, Tel: 650 961 3300 email: plines@input.com

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Asia/Pacific

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Market Profile

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Australia

Key Market Statistics 1997

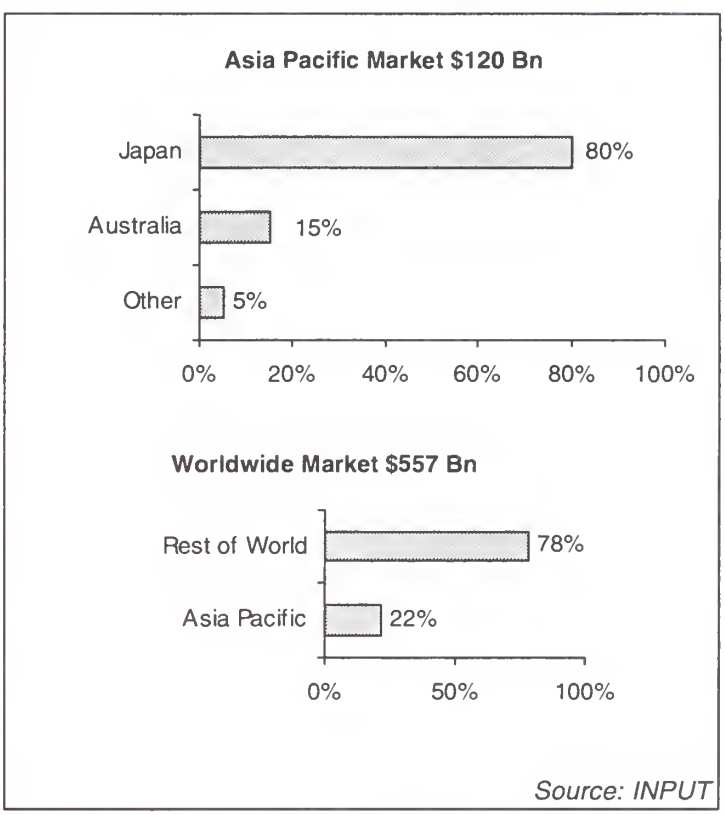
The Australian IT Software & Services market represents only 5% of the Asia Pacific market but is its second largest country market, see Exhibit 1.

Key Statistics for Australia are:

- Total IT Software & Services Market 1997 -$6.4 Billion
- Internet/Intranet Services Market 1997 - $0.26 Billion
- Total IT User Expenditure $16.5 Billion
- GDP $362 Billion and current growth forecast at 3.5%
- Workforce 8.6 million, 47% of the total population of 18.3 million.

Exhibit 1

IT Software & Services Markets 1997



Source: INPUT

Key Indicators

- The Australian IT Software & Services Market is estimated to represent 39% of all IT user expenditure.

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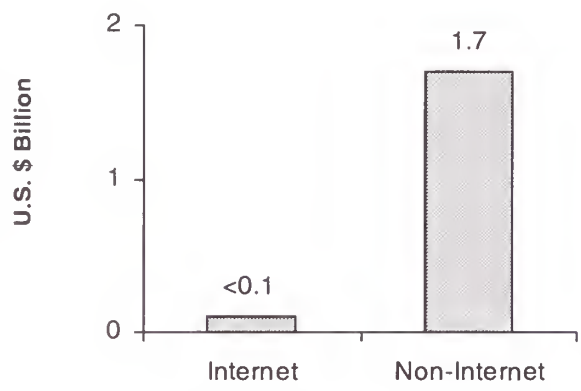
- The Internet /Intranet Services proportion is expected to account for 4.1% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in Australia in 1997 is estimated to be about $1.7 billion, see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- Australia 1997

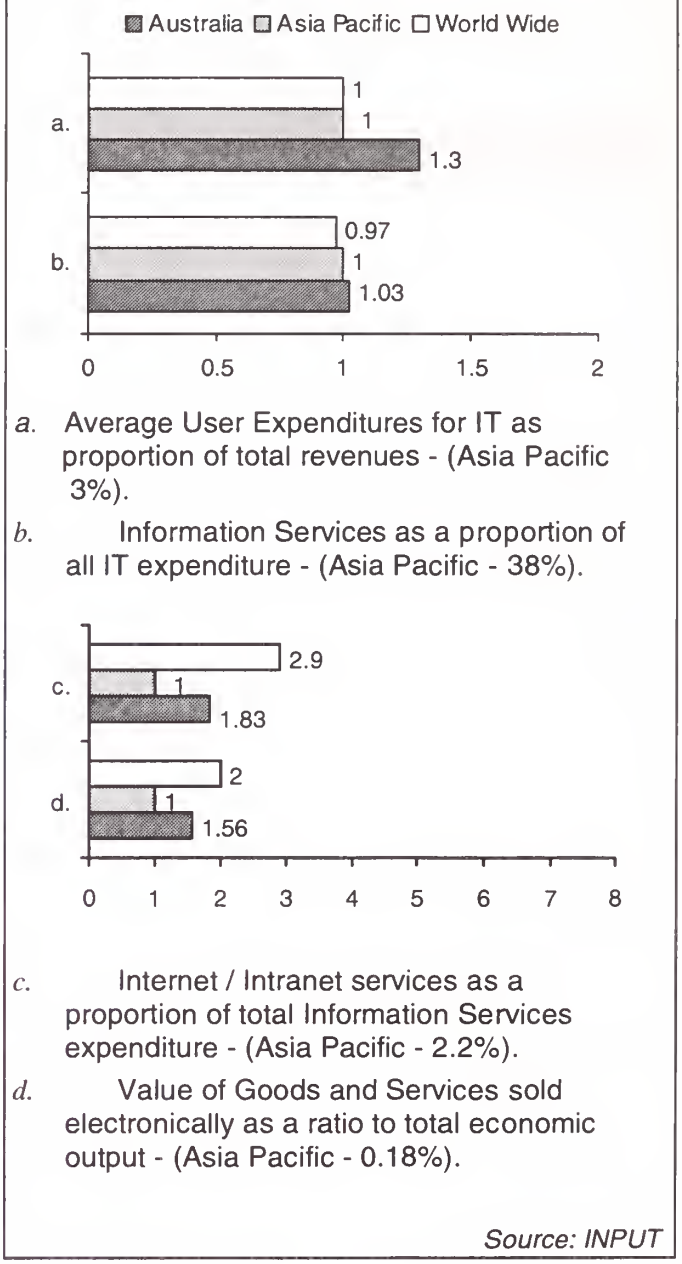


Source: INPUT

- Exhibit 3 shows comparative ratios for Australia, Asia Pacific and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for Asia Pacific.

Exhibit 3

Comparative Ratios for Australia



a. Average User Expenditures for IT as proportion of total revenues - (Asia Pacific 3%).

b. Information Services as a proportion of all IT expenditure - (Asia Pacific - 38%).

c. Internet / Intranet services as a proportion of total Information Services expenditure - (Asia Pacific - 2.2%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (Asia Pacific - 0.18%).

Source: INPUT

Economic Context

The current status of the Australian economy is characterised by the following:

- *Economic growth:*
  – Official growth target for 1997 and 1998, 3.5%.

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- *Employment:*
  - 47% of the Australian population is represented within the working population.

- *Unemployment:*
  –8.5% level for 1996 is expected to decrease to a slightly improved 8.4% in 1997, and 8.2% in 1998.

- - GDP deflators are estimated at:

1996	1.9%
1997	1.8%
1998	2.2%

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet component are shown in Exhibit 4.

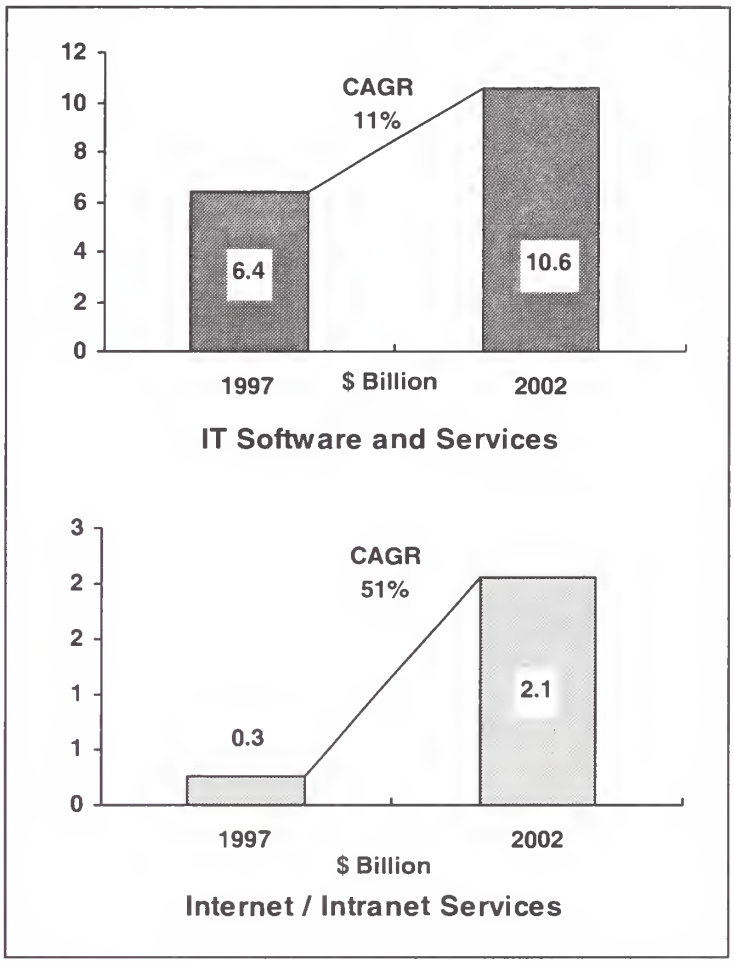
Forecasts for the nine principal categories of information services expenditure in the Australian market are shown in Exhibit 5.

Exhibit 6 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category are provided in Exhibit 8.

Exhibit 4

IT Software & Services Growth Australia 1997 - 2002



Source: INPUT

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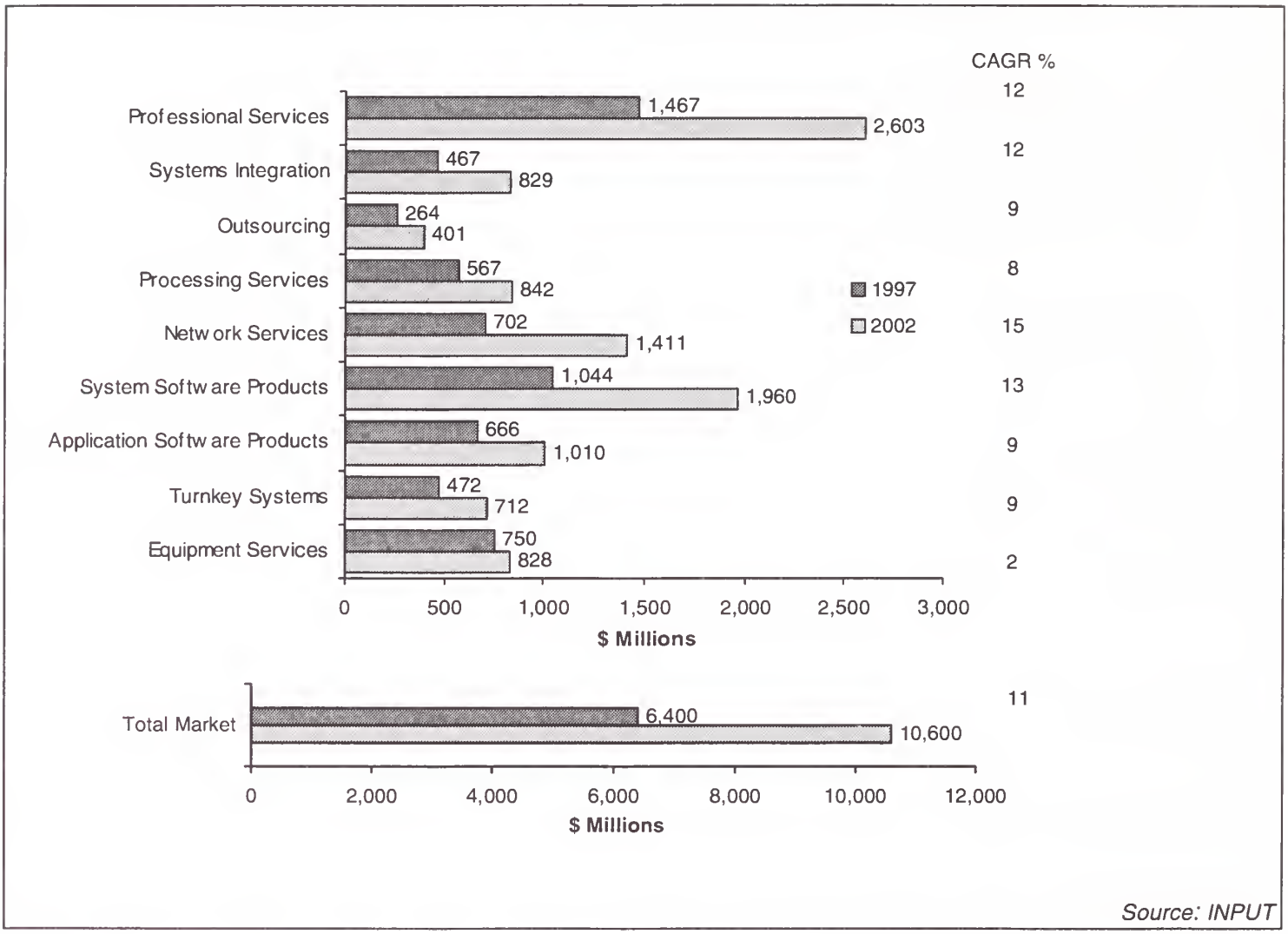
Exhibit 5

IT Software & Services Market Growth - Australia 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Services Category

	Australia	Asia Pacific	Worldwide
Outsourcing	9	13	20
Network Services	15	17	17
Application Software Products	13	14	15
Professional Services	12	10	12
Systems Integration	12	13	17
Systems Software Products	9	11	11
Processing Services	8	8	12
Turnkey Systems	9	7	13
Equipment Services	2	2.5	2

Source: INPUT

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User Expenditures for IT

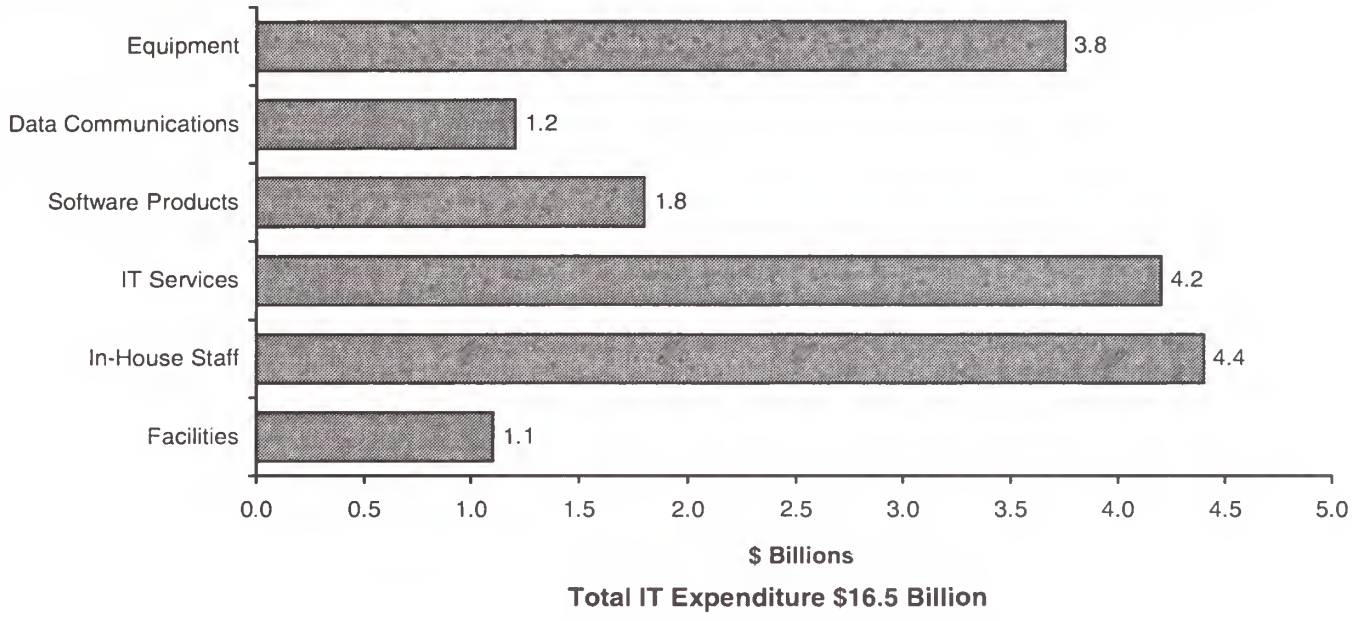
Exhibit 7 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 8 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 7

Total Information Technology Related Expenditures - Australia 1997



Source: INPUT

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Exhibit 9

IT Software & Services Market Forecast by Product/Services Category Australia, 1997-2002

Delivery Modes	US $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	1,310	12%	1,467	1,656	1,862	2,083	2,331	2,603	12%
- IS Consulting	368	14%	419	480	546	620	705	795	14%
- Education & Training	125	6%	132	141	152	163	175	189	7%
- Software Development	818	12%	916	1,035	1,165	1,300	1,451	1,619	12%
Systems Integration	418	12%	467	527	589	659	741	829	12%
- Equipment	150	10%	165	183	203	226	252	282	11%
- Software Products	38	10%	42	47	52	57	63	70	11%
- Professional Services	219	12%	245	278	312	350	396	444	13%
- Other	11	33%	15	19	22	26	29	33	17%
Outsourcing	245	8%	264	289	310	340	370	401	9%
- Platform Operations	137	7%	147	159	170	185	200	215	8%
- Applications Operations	107	9%	117	130	140	155	170	186	10%
Processing Services	531	7%	567	614	665	720	781	842	8%
- Transaction Processing	452	7%	484	525	570	620	675	730	9%
- Utility Processing	25	6%	26	27	28	29	31	32	4%
- Other Processing	54	6%	57	61	66	71	75	80	7%
Network Services	624	13%	702	810	932	1,070	1,228	1,411	15%
- Electronic Information Services	432	11%	479	550	630	720	823	941	14%
- Network Applications	192	16%	223	260	302	350	405	470	16%
Applications SW Products	941	11%	1,044	1,185	1,345	1,525	1,730	1,960	13%
Systems SW Products	622	7%	666	724	785	855	930	1,010	9%
Turnkey Systems	433	9%	472	515	560	607	659	712	9%
- Equipment	173	7%	185	200	215	232	250	270	8%
- Software Products	91	7%	97	105	115	125	135	147	9%
- Professional Services	170	12%	190	210	230	250	274	295	9%
Equipment Services	735	2%	750	765	780	796	812	828	2%
Grand Total	5,858	9%	6,399	7,084	7,827	8,655	9,581	10,597	11%

Source: INPUT

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Market Profile

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China

Key Market Statistics 1997

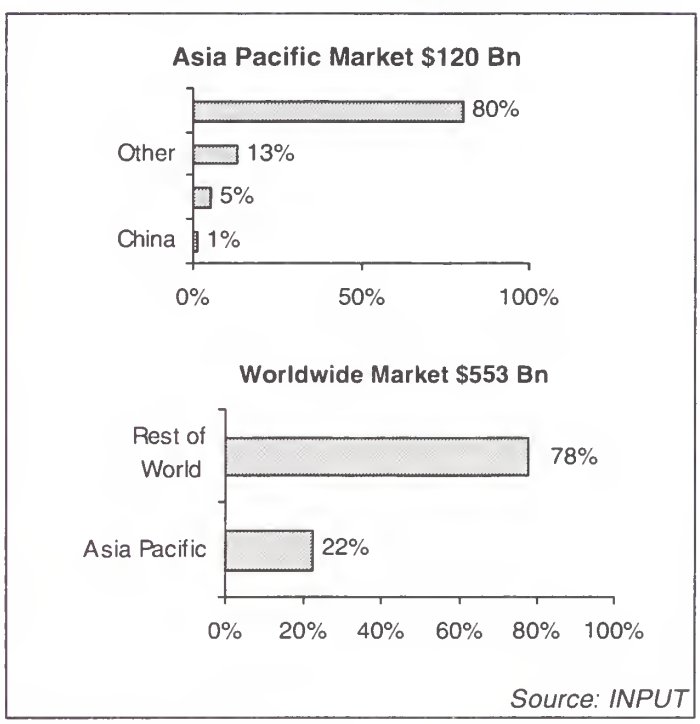
The Chinese IT Software & Services market accounts for only 1% of the Asia Pacific Regional market, see Exhibit 1.

Key Statistics for China are:

- Total IT Software & Services Market 1997 -$1.66 Billion
- Internet/Intranet Services Market 1997 - $0.01 Billion
- Total IT User Expenditure $8.5 Billion
- GDP $870 Billion and current growth forecast at 10.3%
- Workforce 584 million, 48% of the total population of 1,210 million.

Exhibit 1

IT Software & Services Markets 1997



Key Indicators

- The Chinese IT Software & Services Market is estimated to represent 20% of all IT user expenditure.
- The Internet /Intranet Services proportion is expected to account for 0.6% of all IT Software & Services expenditure in 1997.

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- The total value of goods and services sold electronically in China in 1997 is considered to be negligible at this time.

- Exhibit 2 shows comparative ratios for China, Asia Pacific and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.

- The ratios are normalised to the value of 1.0 for Asia Pacific.

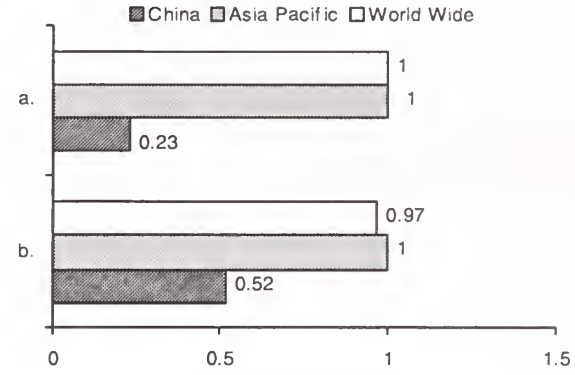
- *Employment:*
  - 48% of the Chinese population is represented within the working population.

- *Unemployment:*
  – 5.2% level for 1996.

- - Inflation is estimated at:
  1996 10.1%

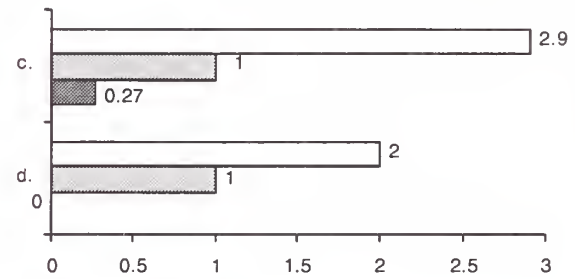
Exhibit 2

Comparative Ratios for China



a. Average User Expenditures for IT as proportion of total revenues - (Asia Pacific 3%).

b. Information Services as a proportion of all IT expenditure - (Asia Pacific - 38%).



c. Internet / Intranet services as a proportion of total Information Services expenditure - (Asia Pacific - 2.2%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (Asia Pacific - 0.18%).

Source: INPUT

Economic Context

The current status of the Chinese economy is characterised by the following:

- *Economic growth:*
  – Official growth target for 1997 - 10.3%

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IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet component are shown in Exhibit 3.

Forecasts for the nine principal categories of information services expenditure in the Chinese market are shown in Exhibit 4.

Exhibit 5 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category are provided in Exhibit 7.

Exhibit 3

IT Software & Services Growth China 1997 - 2002

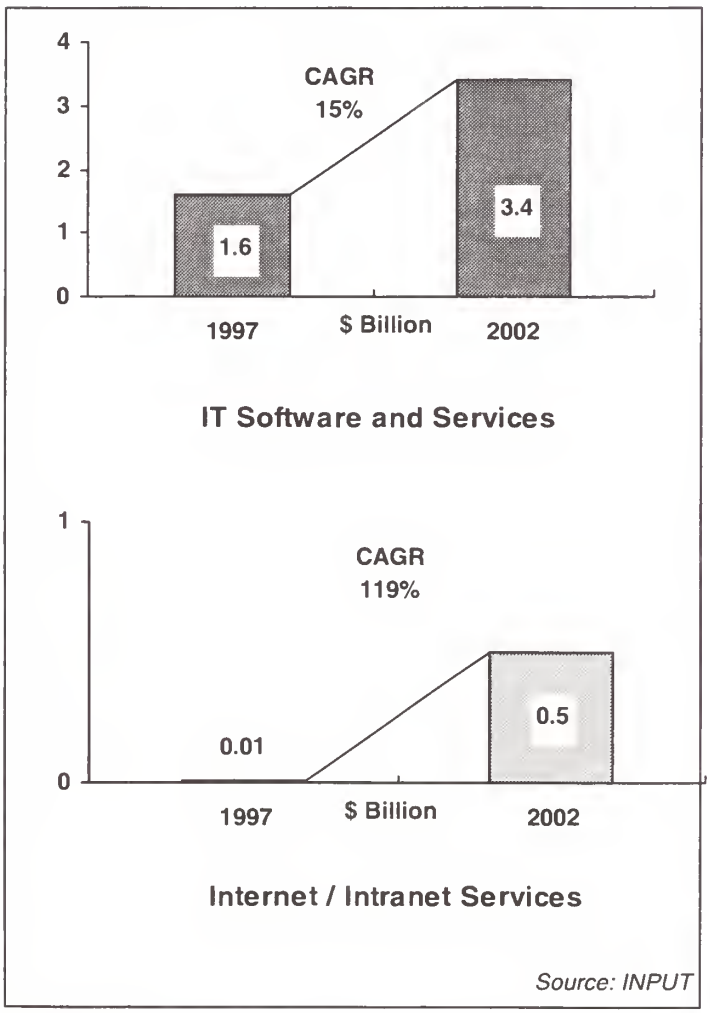

Exhibit 4

IT Software & Services Market Growth - China 1997 - 2002

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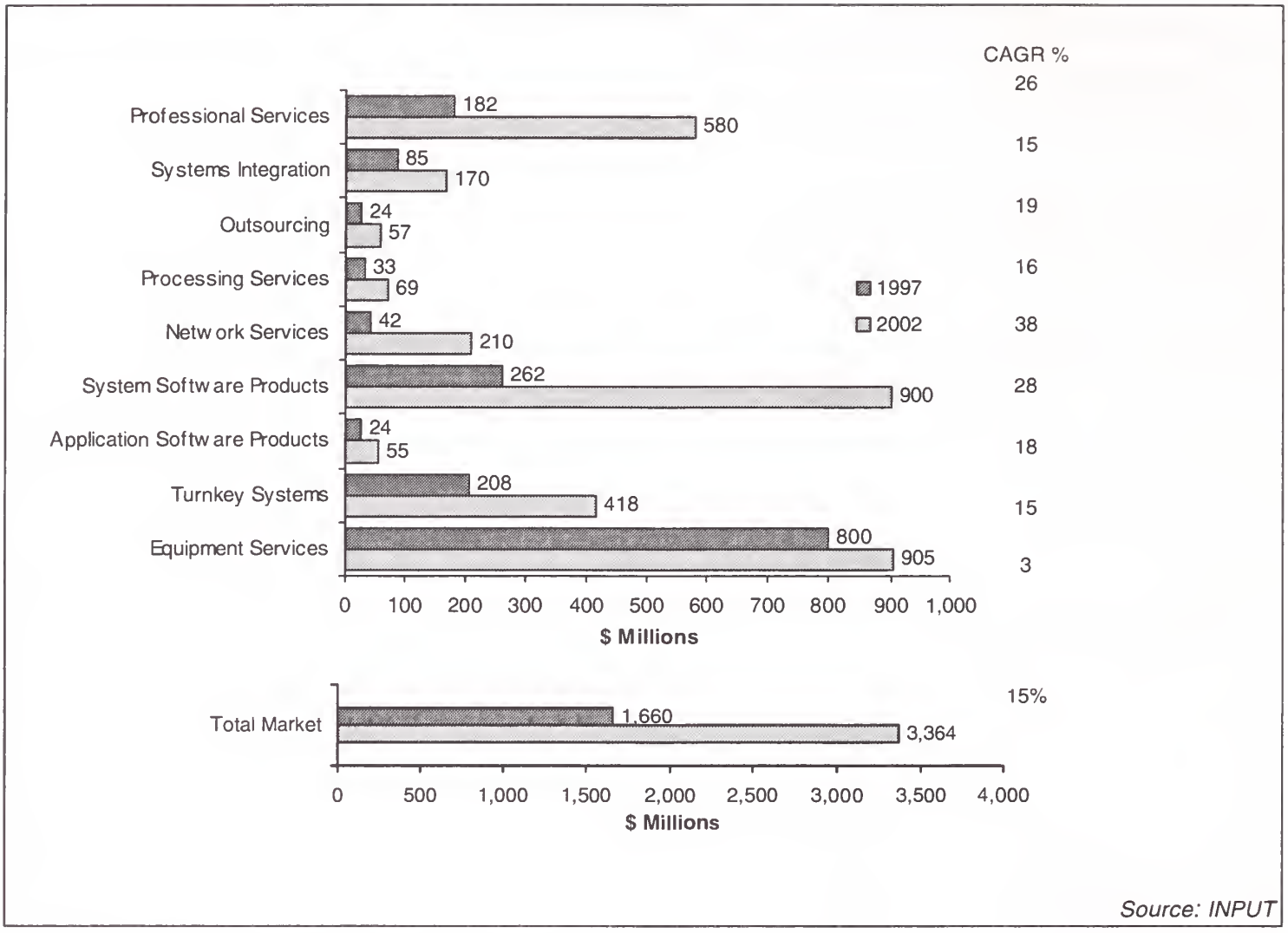

Source: INPUT

Exhibit 5

Growth Rate Comparison of Product/Services Category

	China	Asia Pacific	Worldwide
Outsourcing	19	13	20
Network Services	38	17	17
Application Software Products	28	14	15
Professional Services	26	10	12
Systems Integration	15	13	17
Systems Software Products	18	11	11
Processing Services	16	8	12
Turnkey Systems	15	7	13
Equipment Services	3	2.5	2

Source: INPUT

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User Expenditures for IT

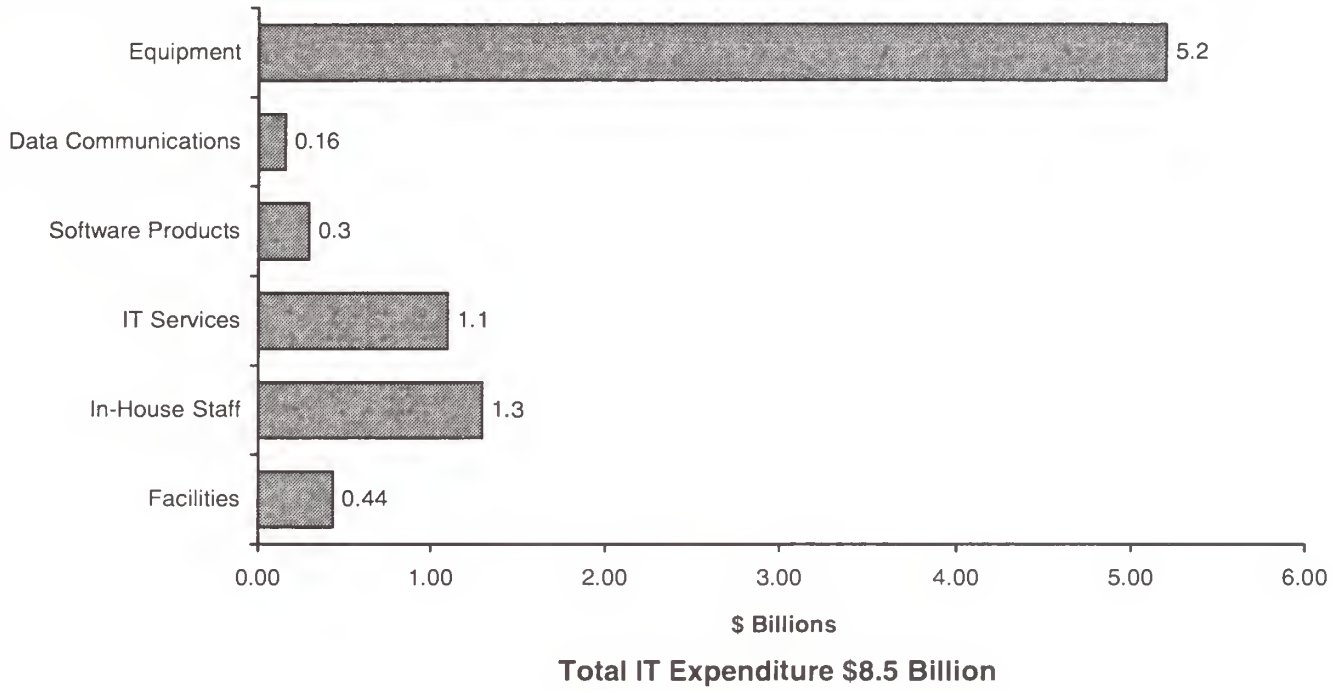
Exhibit 6 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 7 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 6

Total Information Technology Related Expenditures - China 1997



Total IT Expenditure $8.5 Billion

Source: INPUT

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Exhibit 7

IT Software & Services Market
Forecast Product/Services Category China, 1997-2002

Delivery Modes	US $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	148	23%	182	228	288	364	460	580	26%
Systems Integration	79	8%	85	97	112	128	148	170	15%
Outsourcing	21	15%	24	28	33	40	48	57	19%
Processing Services	28	17%	33	38	44	52	60	69	16%
Network Services	32	33%	42	58	80	110	152	210	38%
Applications SW Products	213	23%	262	335	429	549	703	900	28%
Systems SW Products	20	23%	24	28	33	39	47	55	18%
Equipment Services	780	2.5%	800	820	841	862	883	905	2.5
Grand Total	1,506	10	1,660	1,872	2,135	2,461	2,864	3,364	15

Source: INPUT

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Market Profile

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India

Key Market Statistics 1997

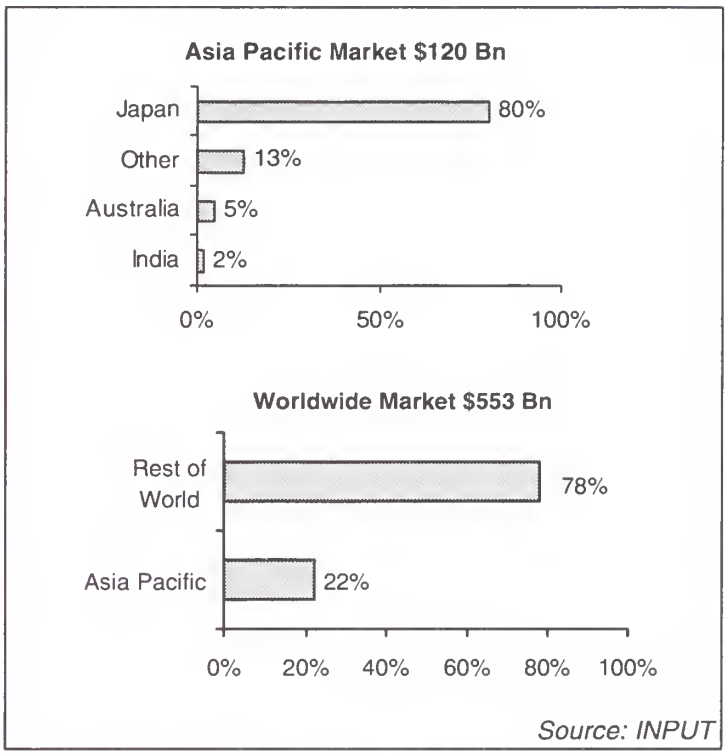
The Indian IT Software & Services market is the fourth largest in the Asia Pacific region, accounting for 2% of the Regional market, see Exhibit 1.

Key Statistics for India are:

- Total IT Software & Services Market 1997 -$2.44 Billion
- Internet/Intranet Services Market 1997 - $0.05 Billion
- Total IT User Expenditure $5.34 Billion
- GDP $870 Billion and current growth forecast at 5.7%
- Workforce 315 million, 33% of the total population of 950 million; organised economic sectors account for only 65 million workers.

Exhibit 1

IT Software & Services Markets 1997



Source: INPUT

Key Indicators

- The Indian IT Software & Services Market is estimated to represent 20% of all IT user expenditure.

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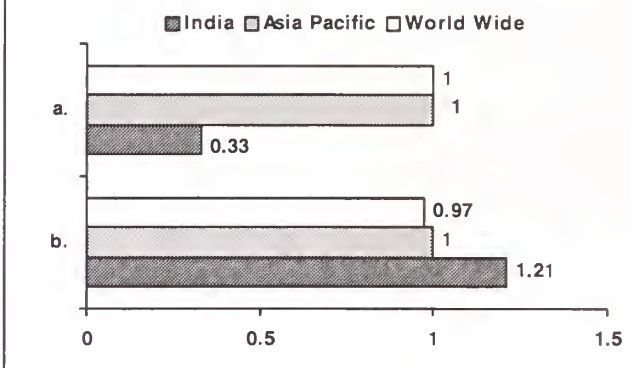
- Exhibit 2 shows comparative ratios for India, Asia Pacific and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for Asia Pacific.

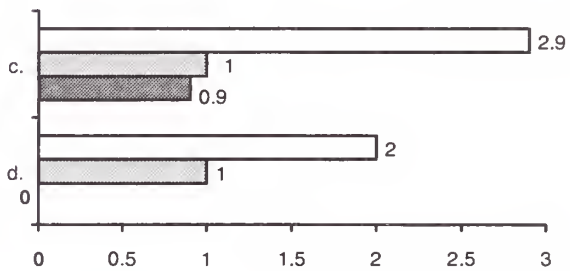
Exhibit 2

Comparative Ratios for India



a. Average User Expenditures for IT as proportion of total revenues - (Asia Pacific 3%).

b. Information Services as a proportion of all IT expenditure - (Asia Pacific - 38%).



c. Internet / Intranet services as a proportion of total Information Services expenditure - (Asia Pacific - 2.2%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (Asia Pacific - 0.18%).

Source: INPUT

Economic Context

The current status of the Indian economy is characterised by the following:

- *Economic growth:*
  – Official growth target for 1997 - 5.8%

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- *Employment:*
  - 33% of the Indian population is represented within the working population.
  – About 65% of this total are occupied in agriculture.
  Only 65 million workers are recognised within organised sectors.

- *Unemployment:*
  –Of the organised workforce, 55% are unemployed.

- - Inflation rates are estimated at:
  1996 9%
  1997 8.9%
  1998 8.5%

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet service component are shown in Exhibit 3.

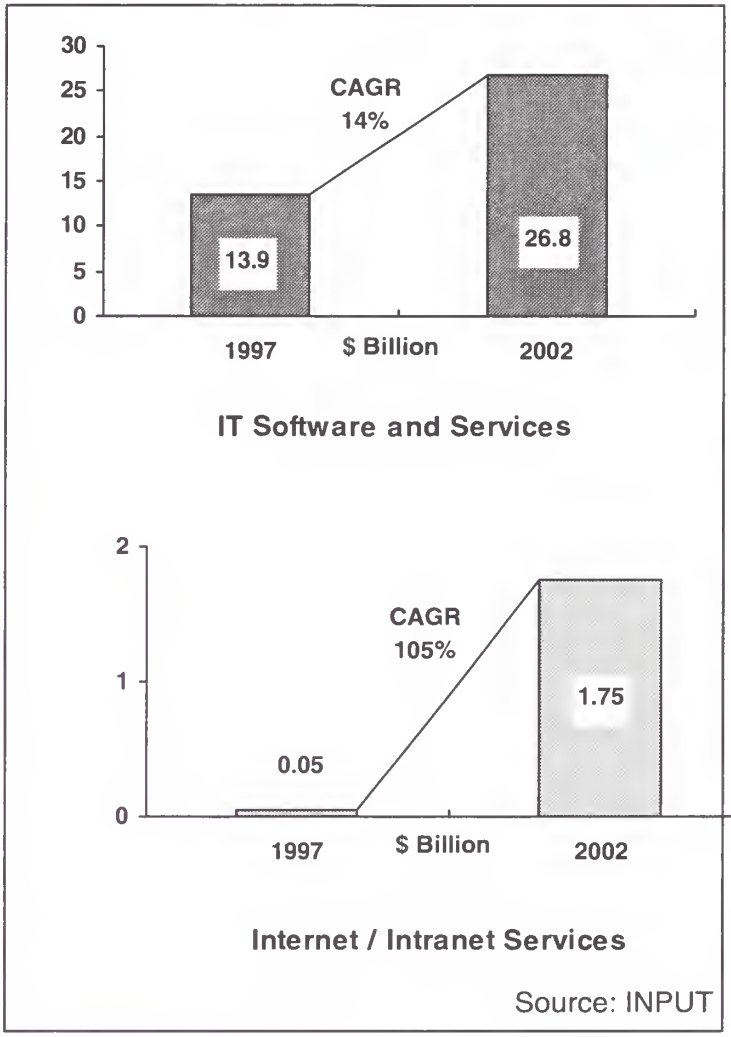
Forecasts for the nine principal categories of information services expenditure in the Indian market are shown in Exhibit 4.

Exhibit 5 shows a comparison of growth rates for each service delivery mode.

- A detailed forecast of the components of each services category are provided in Exhibit 7.

Exhibit 3

IT Software & Services Growth India 1997 - 2002



Source: INPUT

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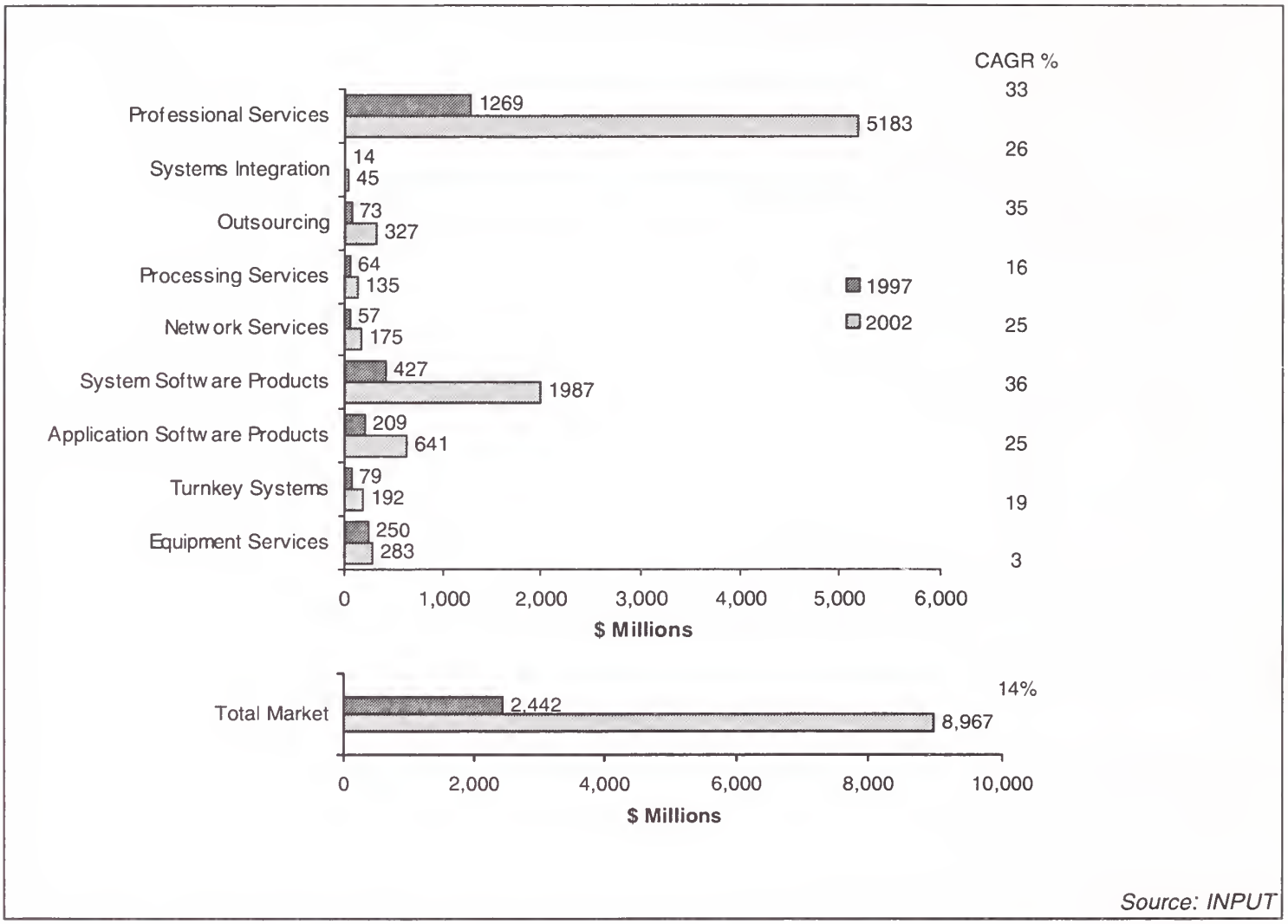
Exhibit 4

IT Software & Services Market Growth - India 1997 - 2002



Source: INPUT

Exhibit 5

Growth Rate Comparison of Product/Services Category

	India	Asia Pacific	Worldwide
Outsourcing	35	13	20
Network Services	25	17	17
Application Software Products	36	14	15
Professional Services	33	10	12
Systems Integration	26	13	17
Systems Software Products	25	11	11
Processing Services	16	8	12
Turnkey Systems	19	7	13
Equipment Services	2.5	2.5	2

Source: INPUT

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User Expenditures for IT

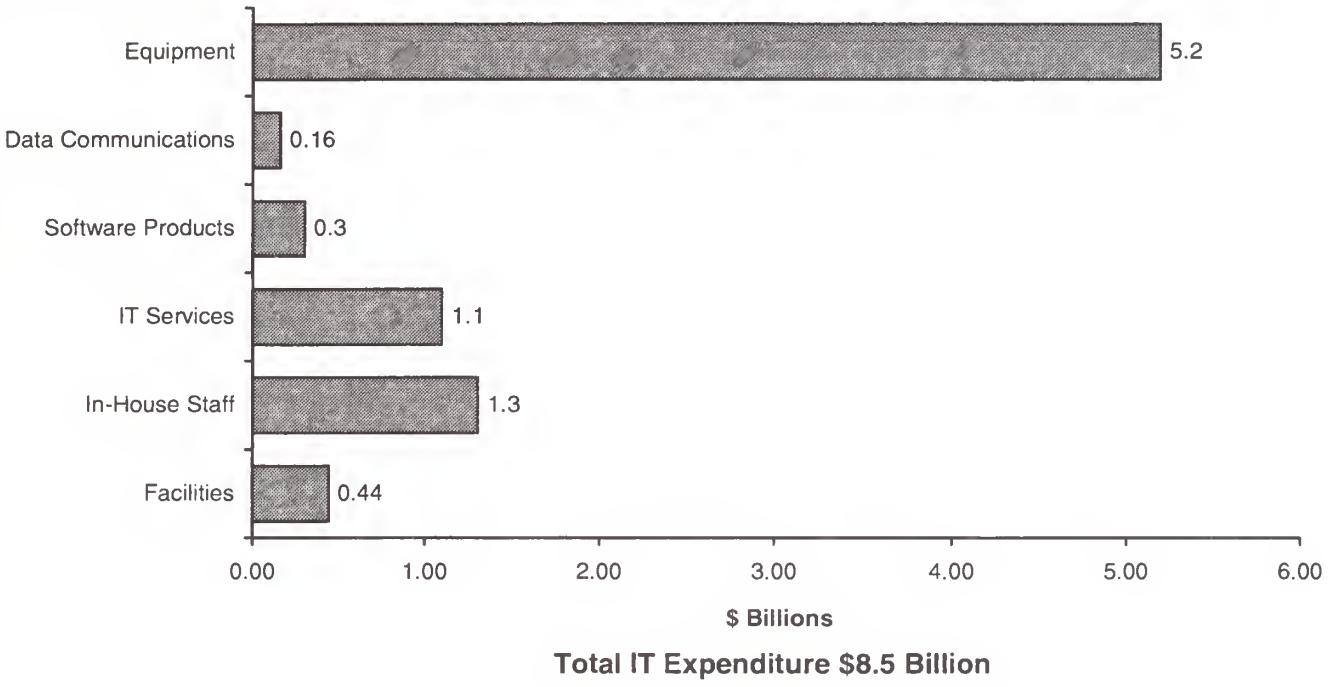
Exhibit 6 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 7 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 6

Total Information Technology Related Expenditures - India 1997



Total IT Expenditure $8.5 Billion

Source: INPUT

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Exhibit 7

IT Software & Services Market
Forecast by Product/Services Category India, 1997-2002

Delivery Modes	US $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	961	32%	1269	1679	2233	2968	3897	5183	33%
Systems Integration	12	20%	14	18	22	27	34	45	26%
Outsourcing	61	20%	73	99	133	180	242	327	35%
Processing Services	56	14%	64	74	86	100	116	135	16%
Network Services	46	25%	57	71	89	111	139	175	25%
Applications SW Products	314	36%	427	581	790	1074	1461	1987	36%
Systems SW Products	166	26%	209	261	327	408	510	641	25%
Turnkey Systems	65	22%	79	96	115	133	160	192	19%
Equipment Services	244	3%	250	256	263	269	276	283	2.5%
Grand Total	1,924	44%	2,442	3,135	4,057	5,271	6,836	8,967	30%

Source: INPUT

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Japan

Key Market Statistics 1997

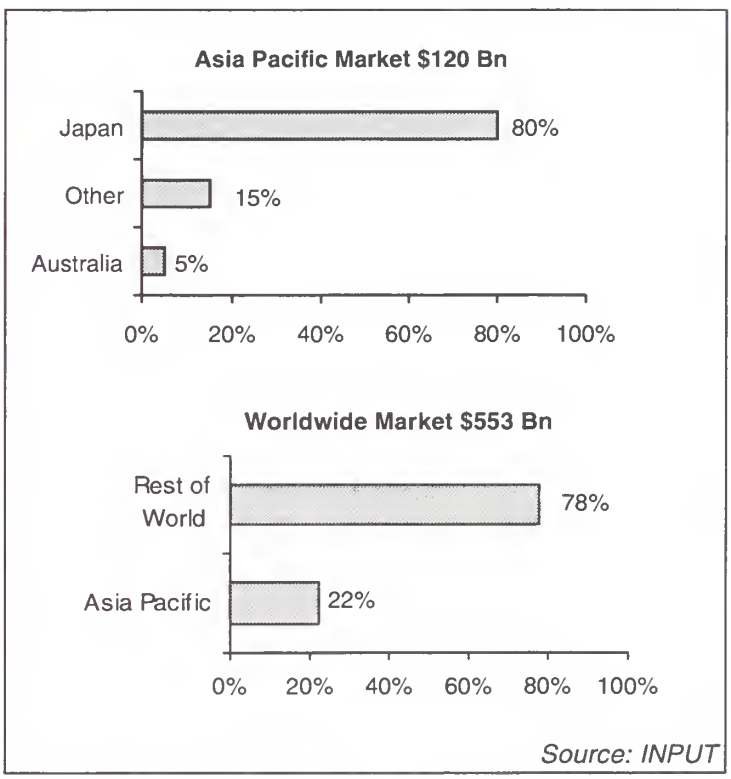
The Japanese IT Software & Services market accounts for 80% of the Asia Pacific market, see Exhibit 1.

Key Statistics for Japan are:

- Total IT Software & Services Market 1997 -$94.7 Billion
- Internet/Intranet Services Market 1997 - $1.9 Billion
- Total IT User Expenditure $242 Billion
- GDP $5,245 Billion and current growth forecast at 2.3%
- Workforce 66 million, 52% of the total population of 126 million.

Exhibit 1

IT Software & Services Markets 1997



Source: INPUT

Key Indicators

- The Japanese IT Software & Services Market is estimated to represent 37% of all IT user expenditure.
- The Internet /Intranet Services proportion is expected to account for 2% of all IT Software & Services expenditure in 1997.

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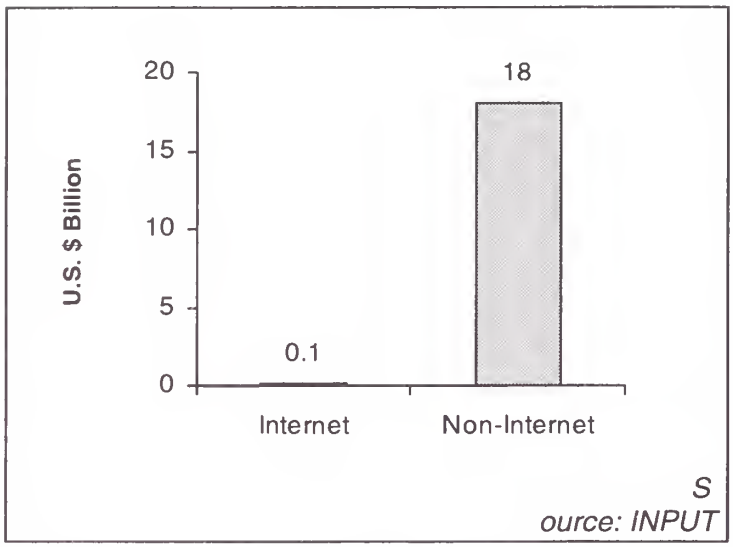
- The total value of goods and services sold electronically in Japan in 1997 is estimated to be about $18.1 billion, see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- Japan 1997



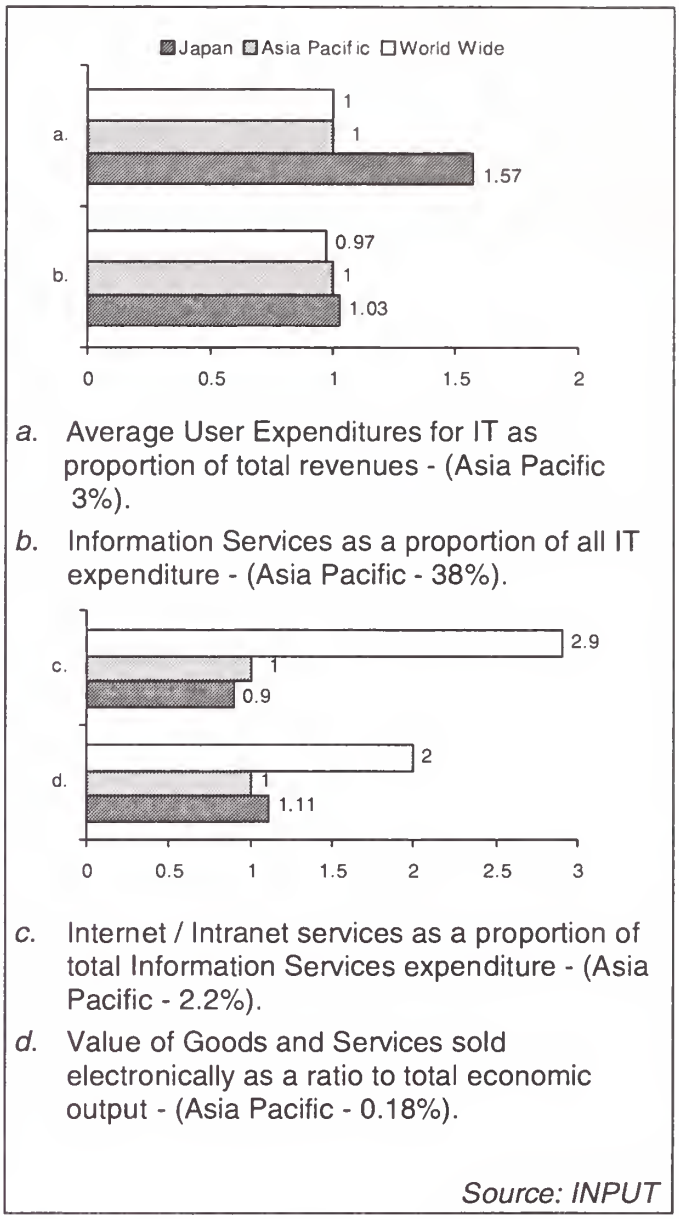
Source: INPUT

- Exhibit 3 shows comparative ratios for Japan, Asia Pacific and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.

- The ratios are normalised to the value of 1.0 for Asia Pacific.

Exhibit 3

Comparative Ratios for Japan



a. Average User Expenditures for IT as proportion of total revenues - (Asia Pacific 3%).

b. Information Services as a proportion of all IT expenditure - (Asia Pacific - 38%).

c. Internet / Intranet services as a proportion of total Information Services expenditure - (Asia Pacific - 2.2%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (Asia Pacific - 0.18%).

Source: INPUT

Economic Context

The current status of the Japanese economy is characterised by the following:

- *Economic growth:*
  – Official growth target for 1997, 3.2% and 3.1% targeted for 1998

- *Employment:*
  - 52% of the Japanese population is represented within the working population.

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- *Unemployment:*
  – 3.3% level for 1996 is expected to decline to a slightly improved 3.2% in 1997, and 3.1% in 1998.

- - GDP deflators are estimated at:

1996	0.0%
1997	0.9%
1998	0.8%

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and Internet / Intranet component are shown in Exhibit 4.

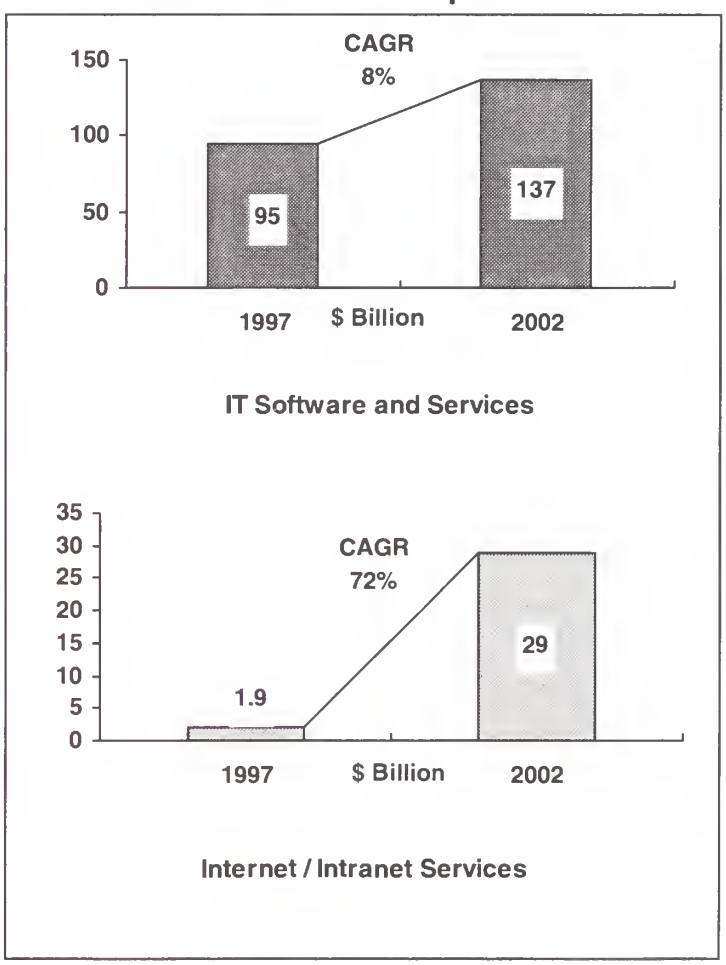
Forecasts for the nine principal categories of information services expenditure in the Japanese market are shown in Exhibit 5.

Exhibit 6 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category are provided in Exhibit 8.

Exhibit 4

IT Software & Services Japan 1997 - 2002



Source: INPUT

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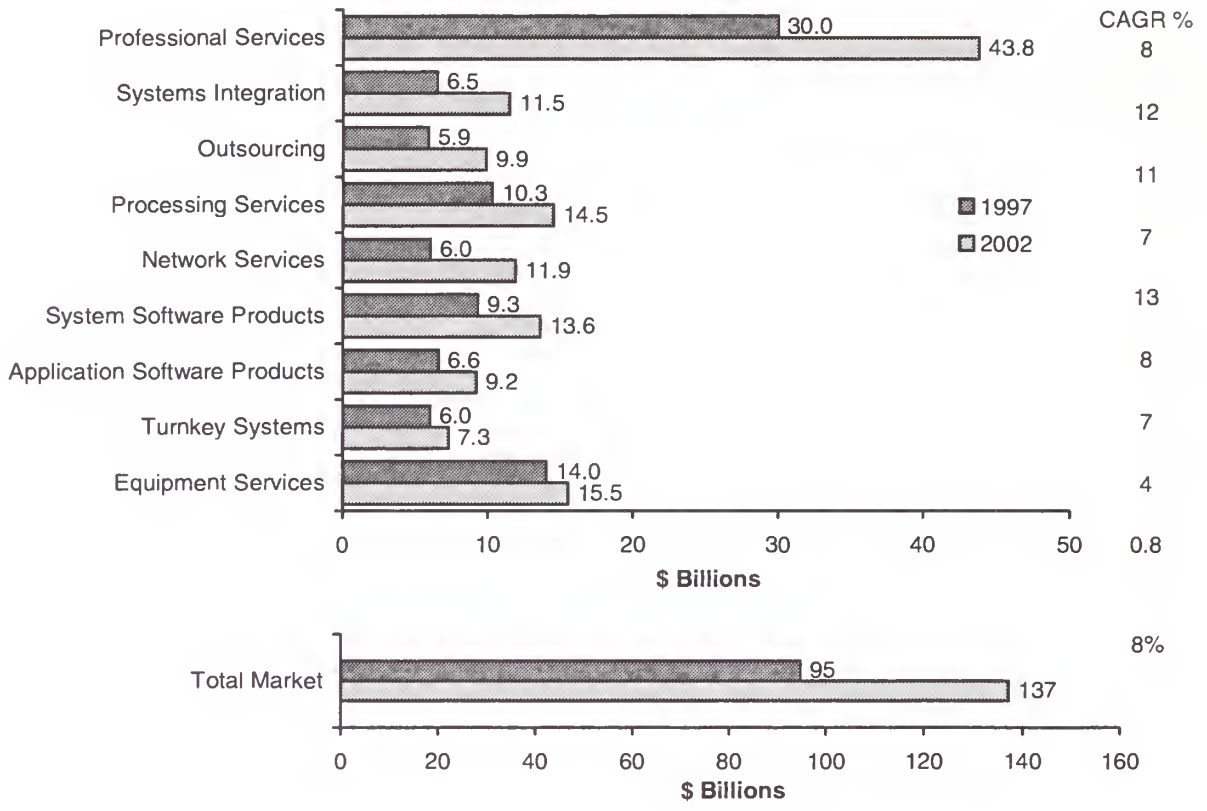
Exhibit 5

IT Software & Services Market Growth - Japan 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Services Category

	Japan	Asia Pacific	Worldwide
Outsourcing	11	13	20
Network Services	13	17	17
Application Software Products	8	14	15
Professional Services	8	10	12
Systems Integration	12	13	17
Systems Software Products	7	11	11
Processing Services	7	8	12
Turnkey Systems	4	7	13
Equipment Services	2	2.5	2

Source: INPUT

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User Expenditures for IT

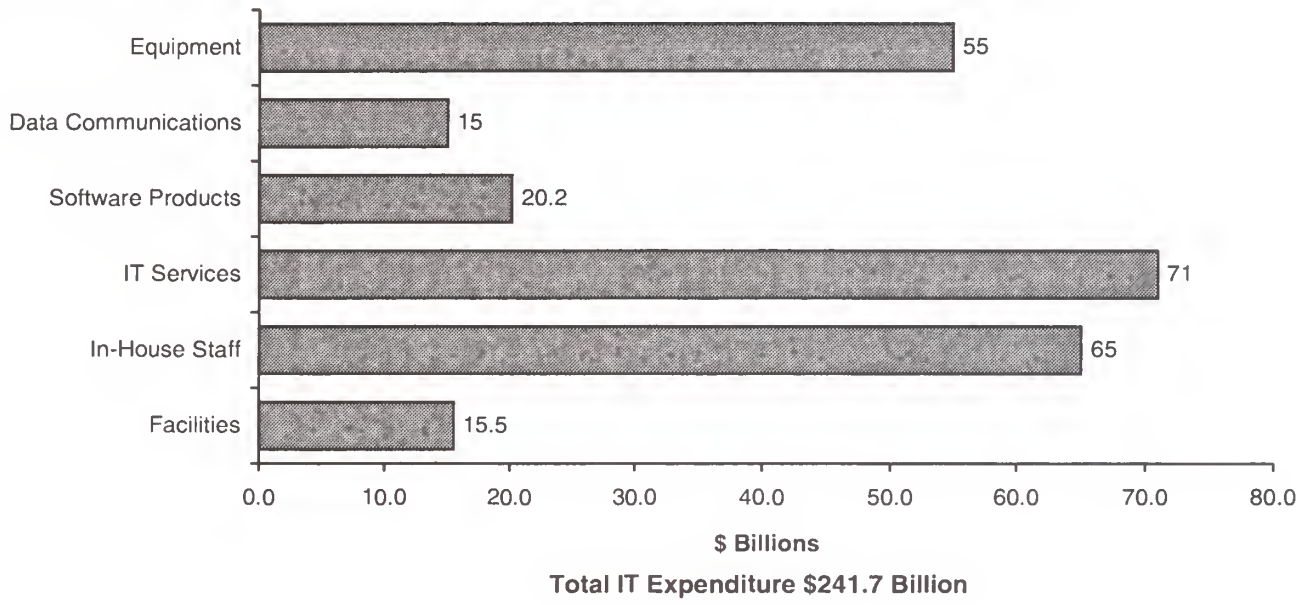
Exhibit 7 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 8 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 7

Total Information Technology Related Expenditures - Japan 1997



Source: INPUT

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Exhibit 8

IT Software & Services Market
Forecast by Product/Services Category Japan, 1997-2002

Delivery Modes	US $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	27,789	8%	29,931	32,275	34,830	37,584	40,555	43,800	8%
- IS Consulting	1,743	4%	1,813	1,920	2,050	2,180	2,335	2,500	7%
- Education & Training	1,093	7%	1,170	1,255	1,350	1,460	1,560	1,700	8%
- Software Development	24,952	8%	26,948	29,100	31,430	33,944	36,660	39,600	8%
Systems Integration	6,078	7%	6,517	7,257	8,140	9,151	10,268	11,523	12%
- Equipment	2,062	6%	2,186	2,425	2,716	3,060	3,427	3,838	12%
- Software Products	1,070	5%	1,123	1,245	1,380	1,532	1,700	1,887	11%
- Professional Services	2,844	9%	3,100	3,475	3,927	4,437	5,014	5,666	13%
- Other	102	6%	108	112	117	121	126	131	4%
Outsourcing	5,327	11%	5,902	6,539	7,243	8,031	8,900	9,862	11%
- Platform Operations	4,777	11%	5,302	5,885	6,533	7,251	8,050	8,936	11%
- Applications Operations	550	9%	600	654	710	780	850	927	9%
Processing Services	9,404	9%	10,248	10,880	11,686	12,561	13,505	14,519	7%
- Transaction Processing	8,092	9%	8,820	9,400	10,150	10,962	11,839	12,786	8%
- Utility Processing	390	6%	413	405	397	389	381	373	-2%
- Other Processing	923	10%	1,015	1,075	1,140	1,210	1,285	1,360	6%
Network Services	5,645	12%	6,306	7,154	8,117	9,210	10,450	11,857	13%
- Electronic Information Services	2,988	15%	3,436	3,883	4,387	4,958	5,602	6,331	13%
- Network Applications	2,657	8%	2,870	3,272	3,730	4,252	4,847	5,526	14%
Applications SW Products	8,438	10%	9,282	10,025	10,827	11,693	12,628	13,638	8%
Systems SW Products	6,154	7%	6,585	7,046	7,539	8,067	8,632	9,236	7%
Turnkey Systems	5,522	7%	5,925	6,177	6,444	6,712	7,003	7,317	4%
- Equipment	1,276	3%	1,314	1,340	1,370	1,397	1,425	1,454	2%
- Software Products	3,028	6%	3,210	3,310	3,409	3,500	3,600	3,708	3%
- Professional Services	1,218	15%	1,401	1,527	1,665	1,814	1,978	2,156	9%
Equipment Services	13,725	2%	14,000	14,280	14,566	14,857	15,154	15,457	2%
Grand Total	88,083	8	94,696	101,634	109,391	117,865	127,094	137,210	8%

Source: INPUT

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South Korea

Key Market Statistics 1997

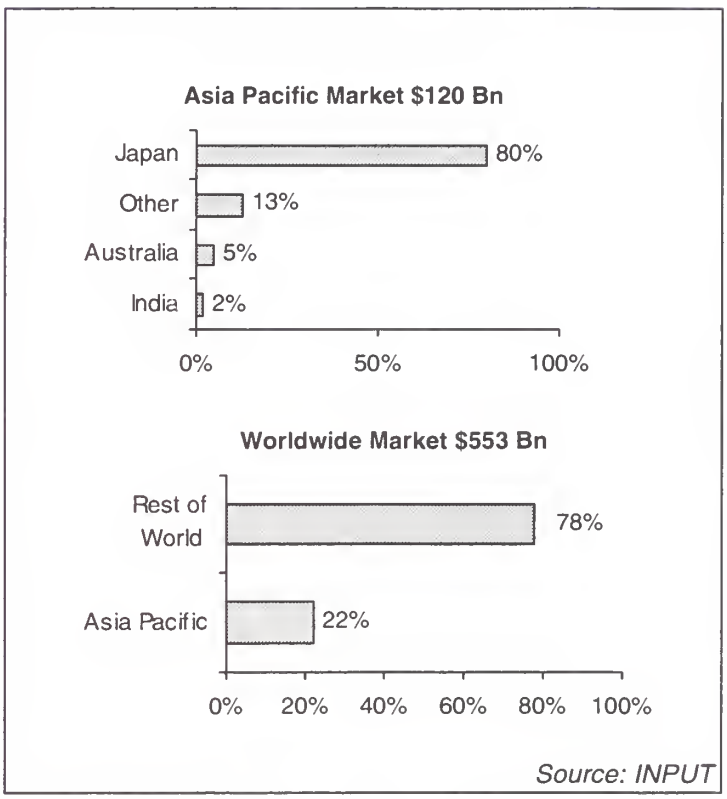
The South Korean IT Software & Services market represents 4% of the Asian Pacific region, see Exhibit 1, but is the third largest country market in the region.

Key Statistics for South Korea are:

- Total IT Software & Services Market 1997 -$3.8 Billion
- Internet/Intranet Services Market 1997 - $0.19 Billion
- Total IT User Expenditure $14.8 Billion
- GDP $490 Billion and current growth forecast at 7.1%
- Workforce 20 million, 44% of the total population of 45 million

Exhibit 1

IT Software & Services Markets 1997



Source: INPUT

Key Indicators

- The South Korean IT Software & Services Market is estimated to represent 31% of all IT user expenditure.
- The Internet /Intranet Services proportion is expected to account for 4.1% of all IT Software & Services expenditure in 1997.

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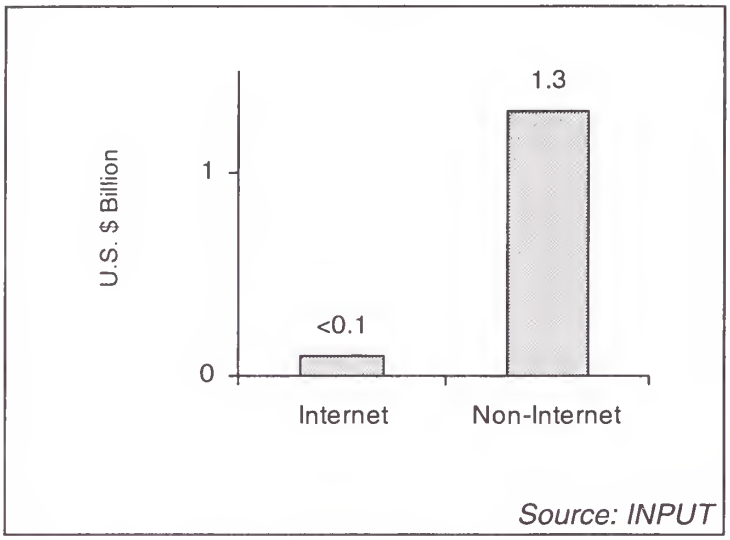
- The total value of goods and services sold electronically in South Korea in 1997 is estimated to be about $1.3 billion (see Exhibit 2).

Exhibit 2

Value of Goods and Services Sold Electronically- South Korea 1997



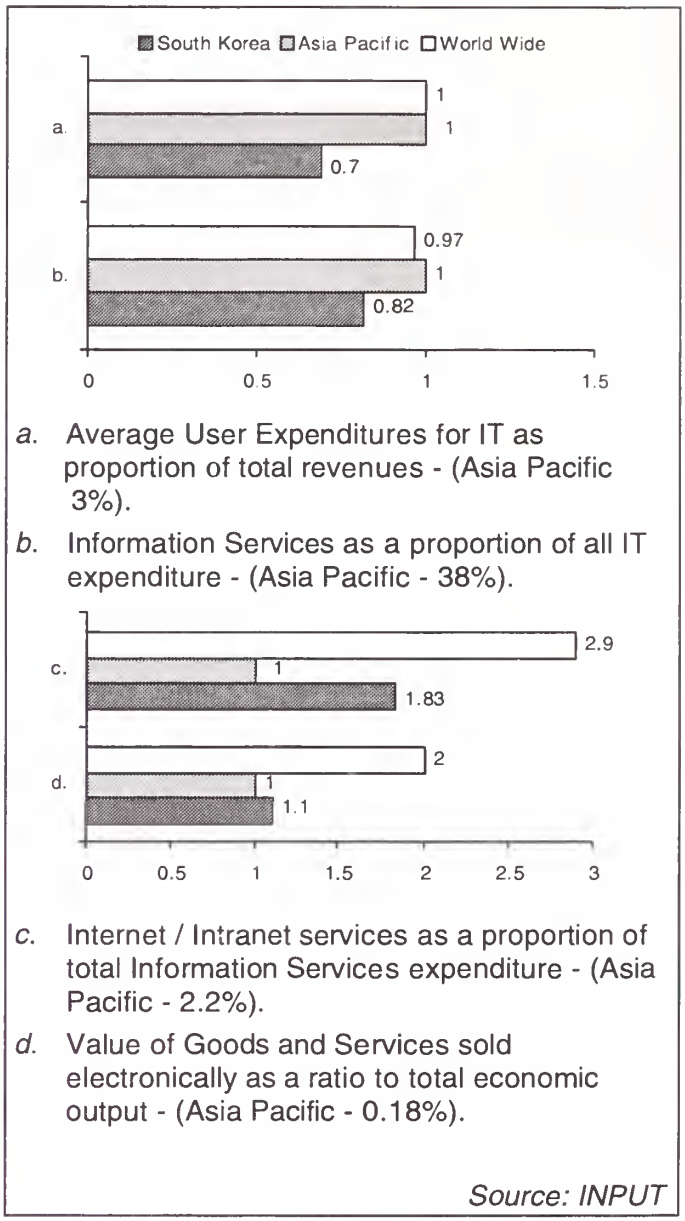
Source: INPUT

- Exhibit 3 shows comparative ratios for South Korea, Asia Pacific and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.

- The ratios are normalised to the value of 1.0 for Asia Pacific.

Exhibit 3

Comparative Ratios for South Korea



a. Average User Expenditures for IT as proportion of total revenues - (Asia Pacific 3%).

b. Information Services as a proportion of all IT expenditure - (Asia Pacific - 38%).

c. Internet / Intranet services as a proportion of total Information Services expenditure - (Asia Pacific - 2.2%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (Asia Pacific - 0.18%).

Source: INPUT

Economic Context

The current status of the South Korean economy is characterised by the following:

- *Economic growth:*
  –Growth target for 1997 - 7.1%

- *Employment:*
  - 44% of the South Korean population is represented within the working population.

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- *Unemployment:*
  –2% in 1996 and 2.7% is forecast for 1997.
  – Unemployment is likely to increase significantly as a result of the economic collapse experienced at the end of 1997.
- - GDP deflators are estimated at:
  1996 3.4%
  1997 3.5%
  1998 4.1%

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet component are shown in Exhibit 4.

Forecasts for the nine principal categories of information services expenditure in the South Korean market are shown in Exhibit 5.

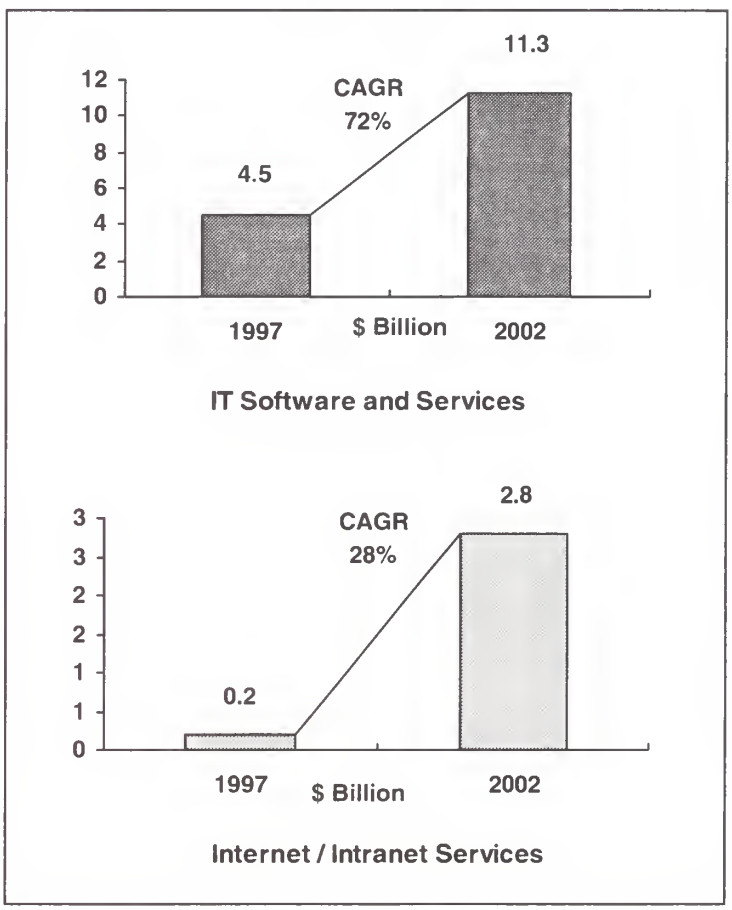
Exhibit 5 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category are provided Exhibit 8.

Exhibit 4

IT Software & Services South Korea

1997 - 2002



Source: INPUT

Exhibit 5

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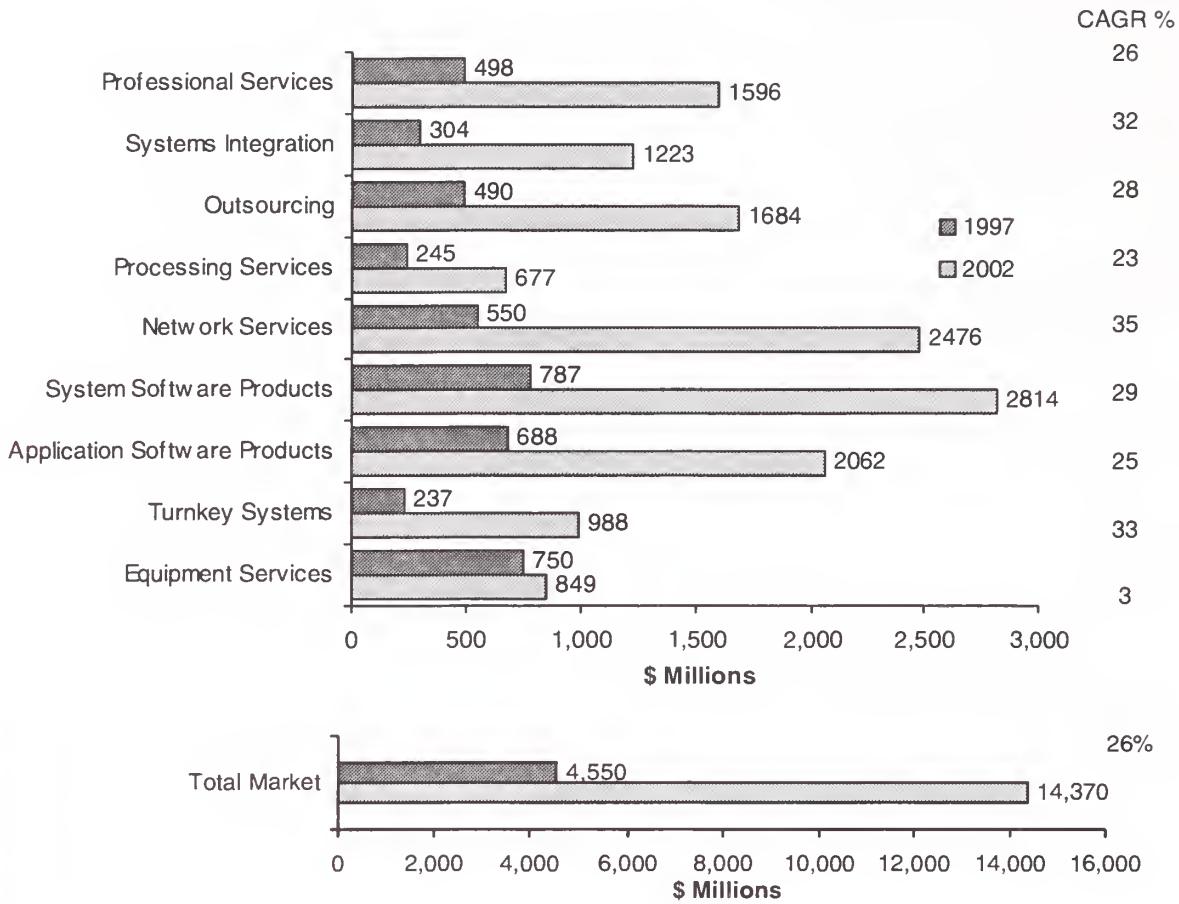
IT Software & Services Market Growth - South Korea 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Services Category

	South Korea	Asia Pacific	Worldwide
Outsourcing	26	13	20
Network Services	35	10	17
Application Software Products	23	14	15
Professional Services	26	10	12
Systems Integration	32	13	17
Systems Software Products	26	10	11
Processing Services	23	8	12
Turnkey Systems	33	7	13
Equipment Services	2.5	2.5	2

Source: INPUT

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User Expenditures for IT

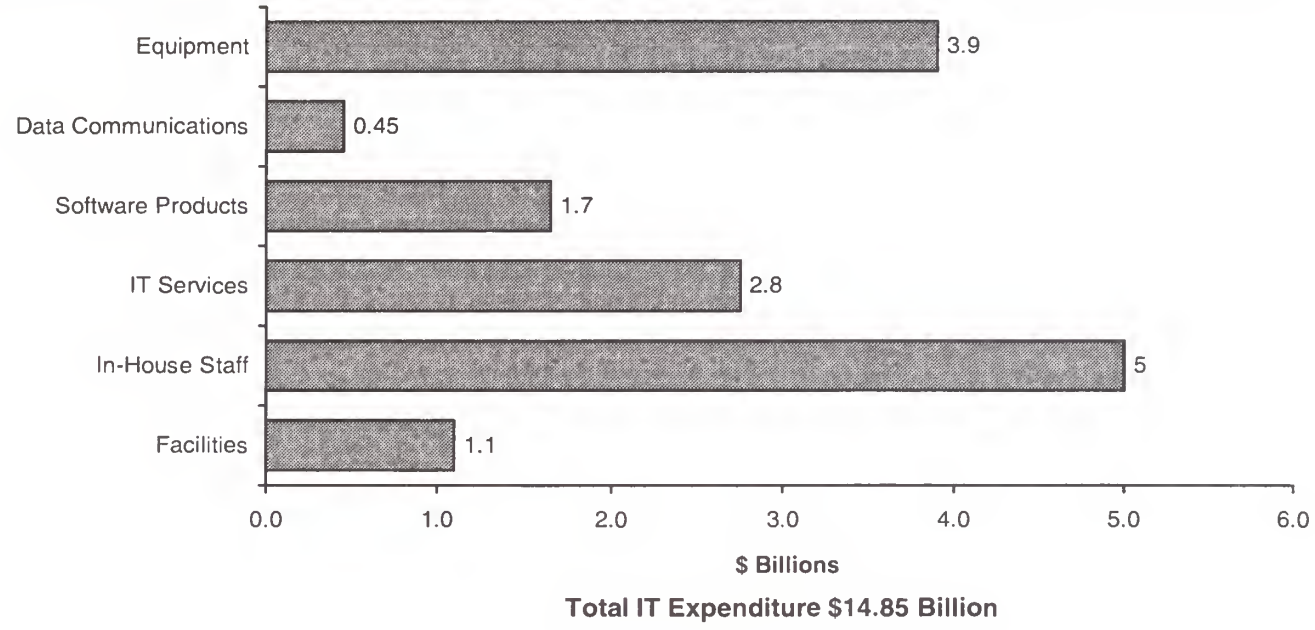
Exhibit 7 provides an assessment of all user expenditures on IT including internal staff and facilities

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 8 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 7

Total Information Technology Related Expenditures - South Korea 1997



Source: INPUT

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Exhibit 8

IT Software & Services Market
Forecast Product/Services Category South Korea, 1997-2002

Delivery Modes	US $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
COUNTRY TOTAL	2961	39%	3799	4895	6306	8111	10468	13520	29%
Professional Services	398	25%	498	630	793	1000	1264	1596	26%
Systems Integration	230	32%	304	401	531	704	927	1223	32%
Outsourcing	386	27%	490	627	803	1028	1315	1684	28%
Processing Services	199	23%	245	303	370	451	552	677	23%
Network Services	410	34%	550	745	1005	1356	1832	2476	35%
Applications SW Products	615	28%	787	1014	1310	1693	2183	2814	29%
Systems SW Products	546	26%	688	859	1072	1320	1650	2062	25%
Turnkey	176	35%	237	316	421	560	744	988	33%
Equipment Services	732	2%	750	769	788	808	828	849	3%
Grand Total	3,692	39%	4,549	5,664	7,094	8,919	11,296	14,369	26%

Source: INPUT

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Israel

Key Market Statistics 1997

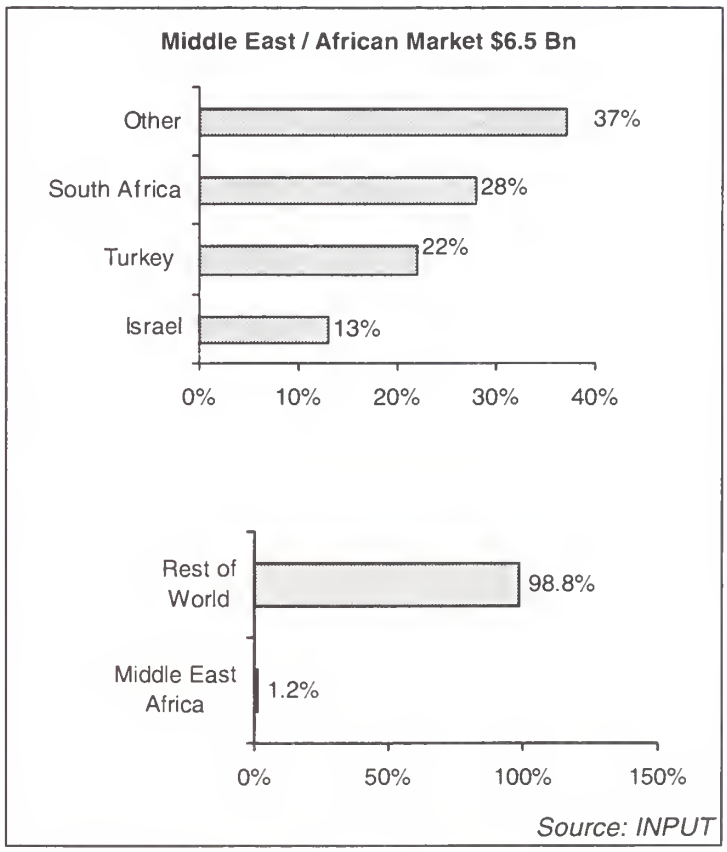
The Israeli IT Software & Services market represents about 13% of the Middle East/Africa market, see Exhibit 1.

Key Statistics for Israel are:

- Total IT Software & Services Market 1997 -$825 Million
- Internet/Intranet Services Market 1997 - $49.5 Million
- Total IT User Expenditure $2.7 Billion
- GDP $83 Billion and current growth forecast at 7%
- Workforce 1.9 million, 35% of the total population of 5.5 million.

Exhibit 1

IT Software & Services Markets 1997



Key Indicators

- The Israeli IT Software & Services Market is estimated to represent 31% of all IT user expenditure.

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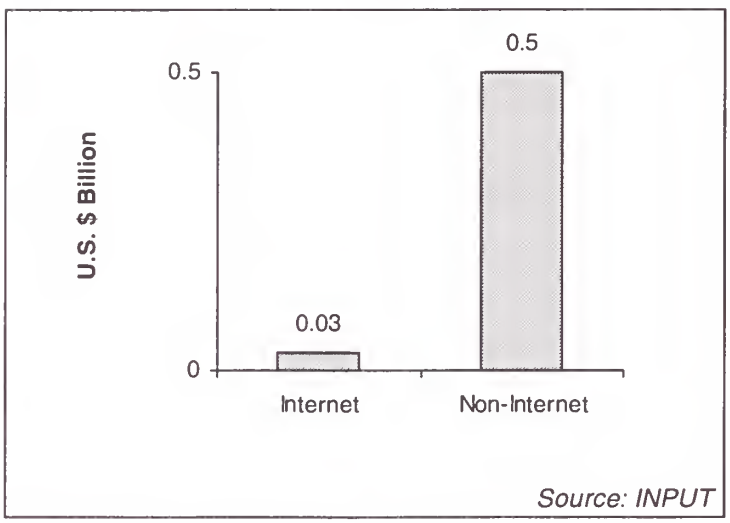
- The Internet / Intranet Services proportion is expected to account for 6% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in Israel in 1997 is estimated to be about $500 Million, see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- Israel 1997

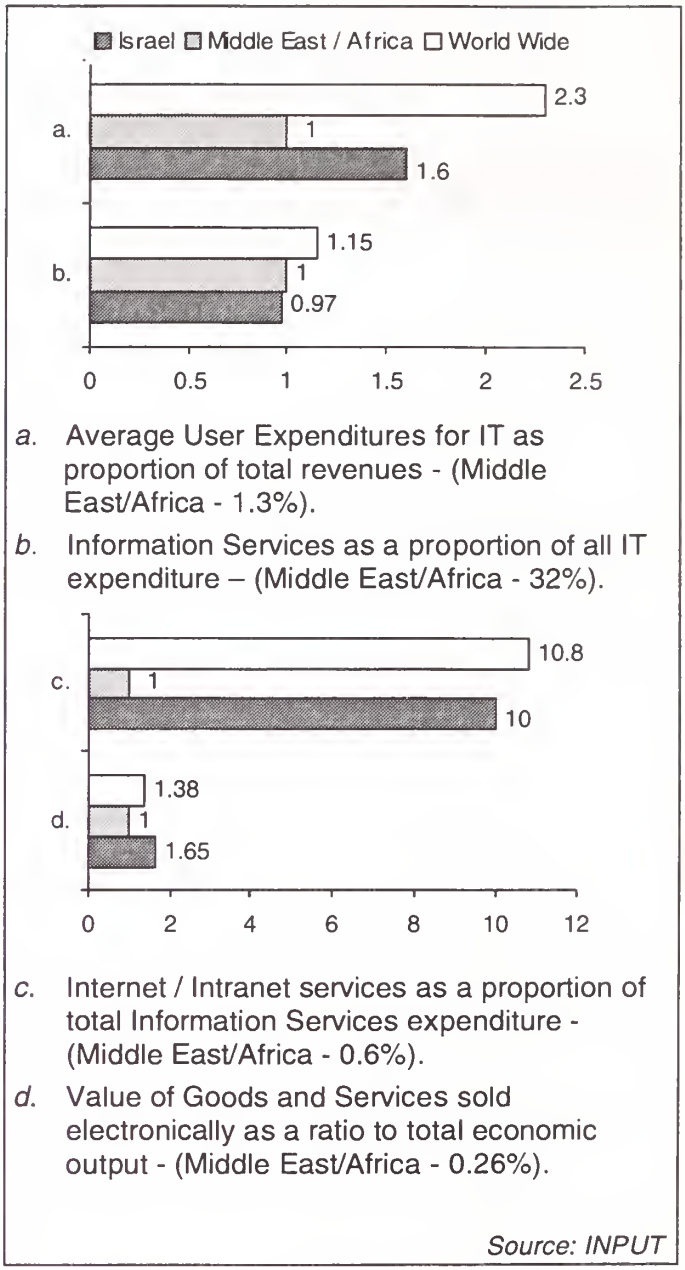


Source: INPUT

- Exhibit 3 shows comparative ratios for Israel, Middle East/Africa and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for Middle East/Africa.

Exhibit 3

Comparative Ratios for Israel



a. Average User Expenditures for IT as proportion of total revenues - (Middle East/Africa - 1.3%).

b. Information Services as a proportion of all IT expenditure – (Middle East/Africa - 32%).

c. Internet / Intranet services as a proportion of total Information Services expenditure - (Middle East/Africa - 0.6%).

d. Value of Goods and Services sold electronically as a ratio to total economic output - (Middle East/Africa - 0.26%).

Source: INPUT

Economic Context

The current status of the Israeli economy is characterised by the following:

- *Economic growth:*
  – Official growth target for 1998, 7%.

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- *Employment:*
  - 35% of the Israeli population is represented within the working population.

- *Unemployment:*
  –6.3% level for 1996.

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet component are shown in Exhibit 4.

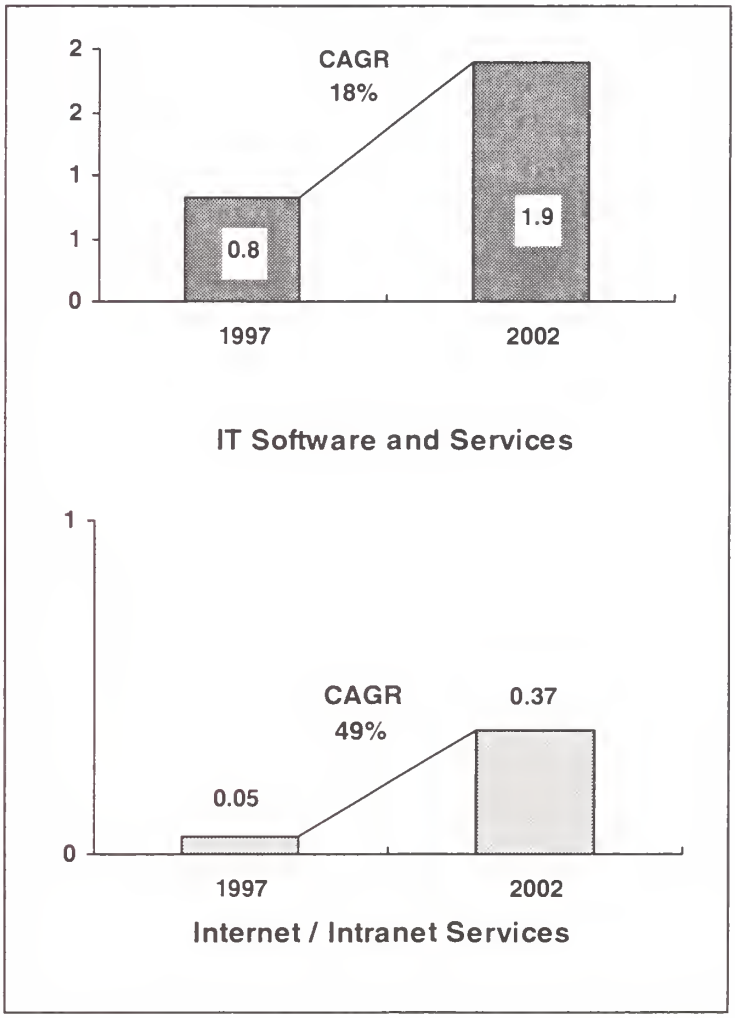
Forecasts for the nine principal categories of information services expenditure in the Israeli market are shown in Exhibit 5.

Exhibit 6 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category is provided in Exhibit 8.

Exhibit 4

IT Software & Services Growth Israel 1997 - 2002



Source: INPUT

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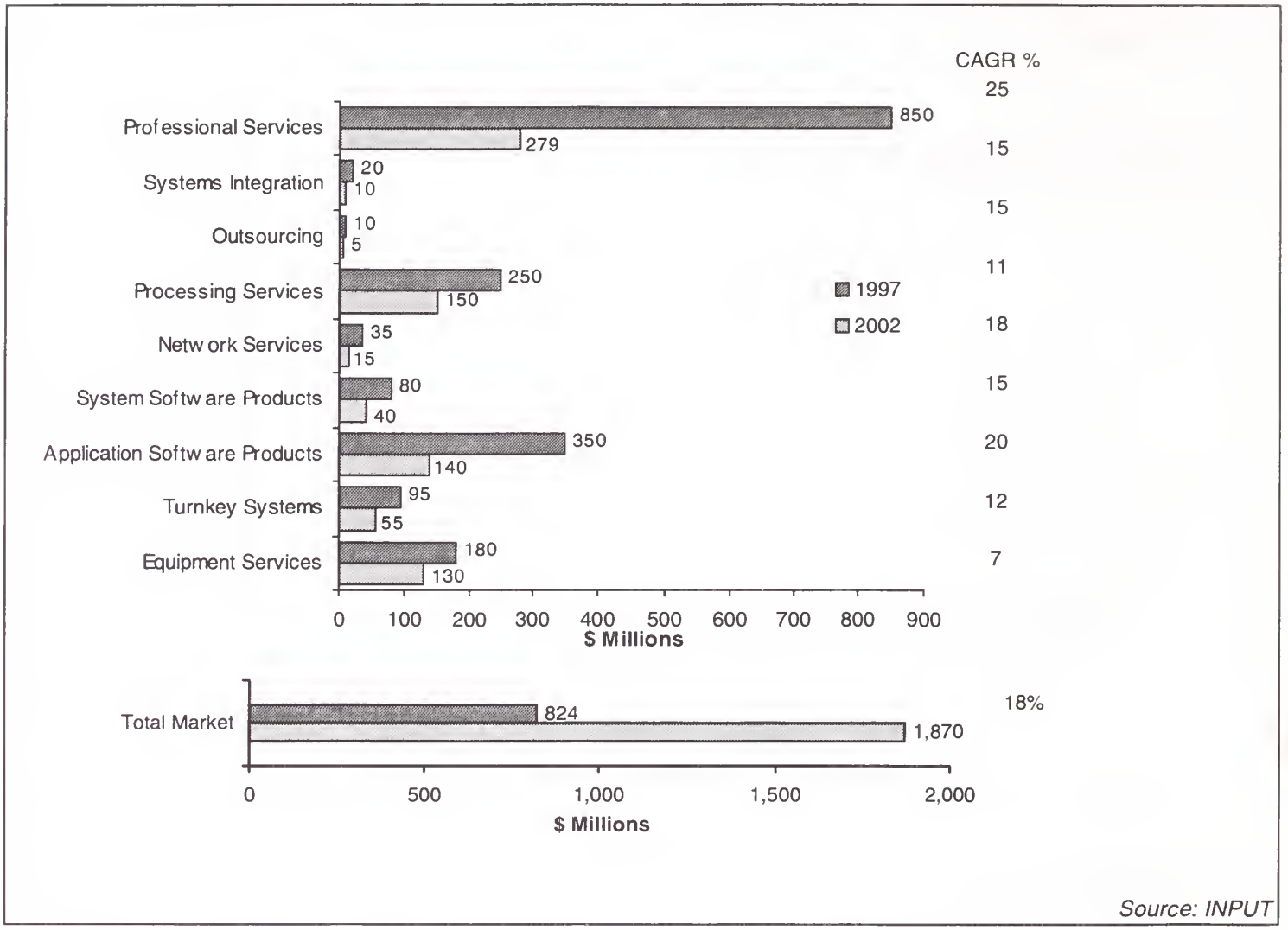
Exhibit 5

IT Software & Services Market Growth - Israel 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Services Category

	Israel	Middle East / Africa	Worldwide
Outsourcing	15	21	20
Network Services	18	19	17
Application Software Products	15	16	15
Professional Services	25	17	12
Systems Integration	15	13	17
Systems Software Products	20	16	11
Processing Services	11	13	12
Turnkey Systems	12	15	13
Equipment Services	7	14	2

Source: INPUT

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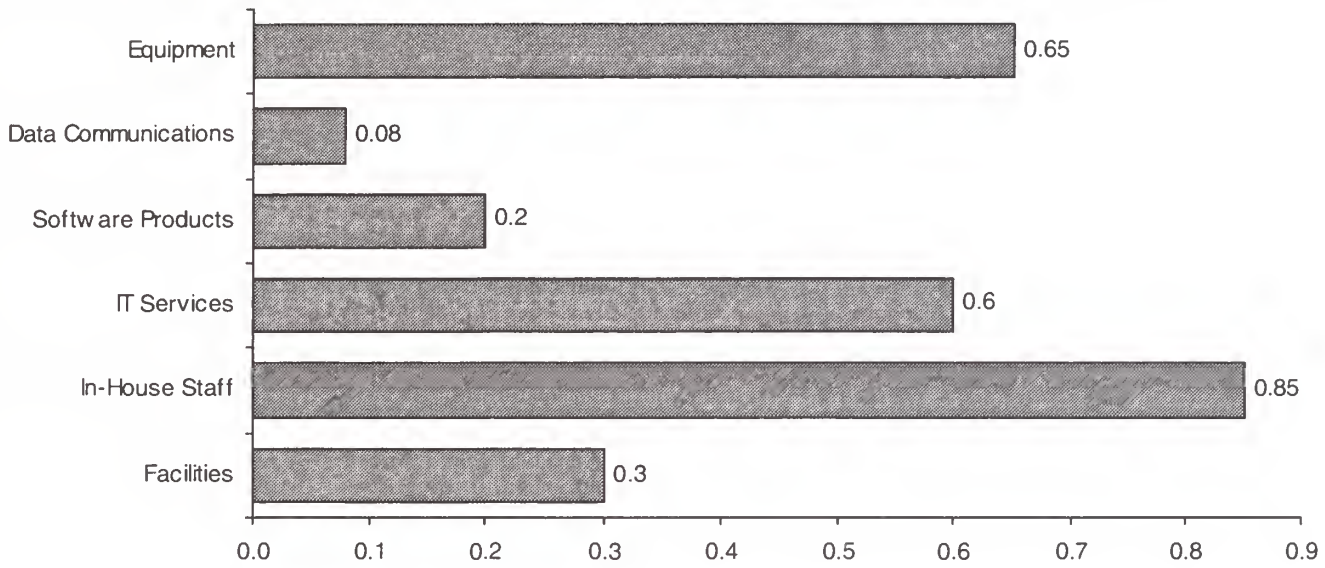
Exhibit 7

Total Information Technology Related Expenditures - Israel 1997



Total IT Expenditure $2.68 Billion

Source: INPUT

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Exhibit 8

IT Software & Services Market
Forecast Product/Services Category Israel, 1997-2002

Delivery Modes	US $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	225	24%	279	349	436	545	681	850	25%
Systems Integration	9	11%	10	11	13	15	17	20	15%
Outsourcing	4	25%	5	6	7	8	9	10	15%
Processing Services	135	11%	150	166	185	205	227	250	11%
Network Services	12	25%	15	18	21	25	29	35	18%
Applications SW Products	35	14%	40	46	53	61	70	80	15%
Systems SW Products	120	17%	140	168	202	243	291	350	20%
Turnkey Systems	50	10%	55	62	69	77	87	95	12%
Equipment Services	120	8%	130	139	148	159	170	180	7%
Grand Total	710	16%	824	965	1,134	1,337	1,581	1,870	18%

Source: INPUT

This Country Profile is issued as part of INPUT's World-Wide IT Software & Services Market Forecast Program. If you have questions or comments on this profile, please call your local INPUT organisation or Peter Lines at INPUT, 1881 Landings Drive, Mountain View, CA 94043-0848, Tel: 650 961 3300 email: plines@input.com

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Market Profile

A Publication from INPUT's Worldwide Market Forecast Program

South Africa

Key Market Statistics 1997

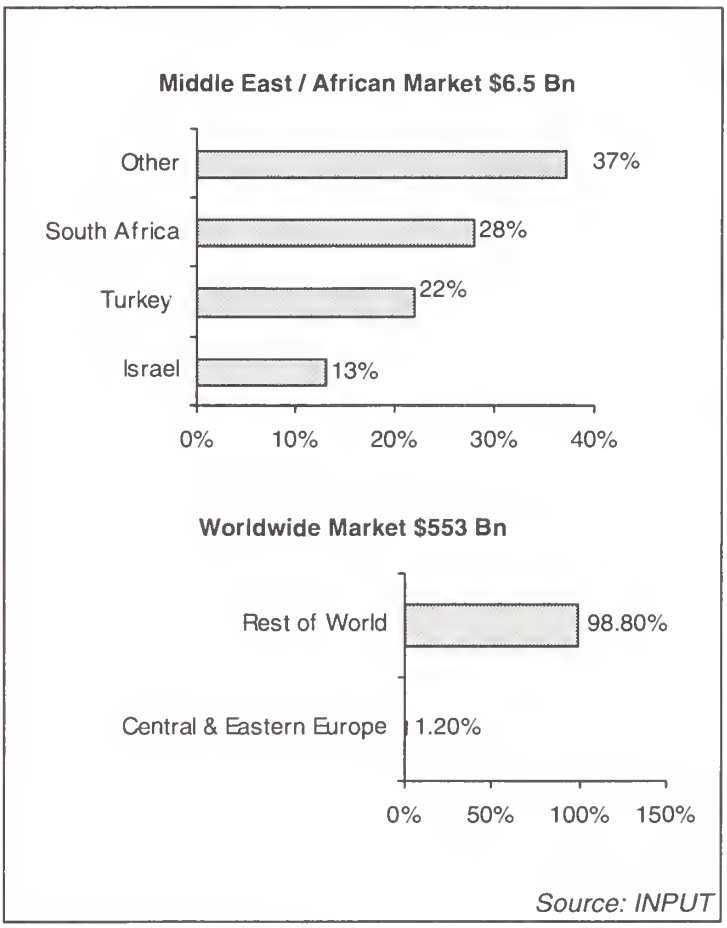
The South African IT Software & Services market represents about 28% of the Middle East/Africa market, see Exhibit 1.

Key Statistics for South Africa are:

- Total IT Software & Services Market 1997 -$1.8 Billion
- Internet/Intranet Services Market 1997 - $72 Million
- Total IT User Expenditure $4.9 Billion
- GDP $135 Billion and current growth forecast at 3.5%
- Workforce 14.2 million, 34% of the total population of 42 million.

Exhibit 1

IT Software & Services Markets 1997



Source: INPUT

Key Indicators

- The South African IT Software & Services Market is estimated to represent 37% of all IT user expenditure.

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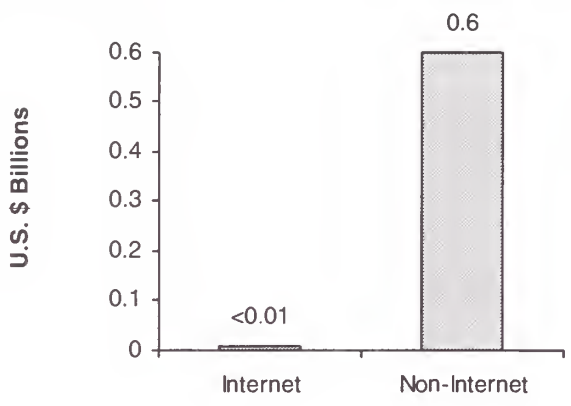
- The Internet / Intranet Services proportion is expected to account for 4% of all IT Software & Services expenditure in 1997.
- The total value of goods and services sold electronically in South Africa in 1997 is estimated to be about $600 million see Exhibit 2.

Exhibit 2

Value of Goods and Services Sold Electronically- South Africa 1997

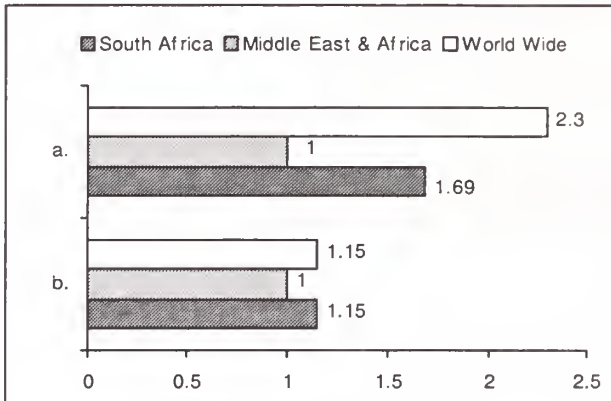


Source: INPUT

- Exhibit 3 shows comparative ratios for South Africa, Middle East/Africa and World Wide which indicate the relative development of IT, the Internet and Electronic Commerce.
- The ratios are normalised to the value of 1.0 for Middle East/Africa.

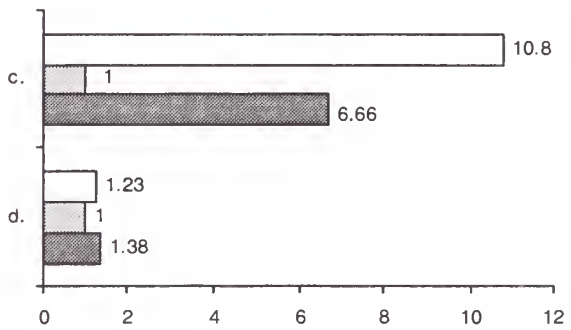
Exhibit 3

Comparative Ratios for South Africa



a. Average User Expenditures for IT as proportion of total revenues - (Middle East/Africa - 1.3%).

b. Information Services as a proportion of all IT expenditure – (Middle East/Africa - 32%).



c. Internet / Intranet services as a proportion of total Information Services expenditure – (Middle East/Africa - 0.6%).

d. Value of Goods and Services sold electronically as a ratio to total economic output – (Middle East/Africa - 0.26%).

Source: INPUT

Economic Context

The current status of the South African economy is characterised by the following:

- *Economic growth:*
  – Official growth target for 1998, 3.5%.

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- *Employment:*
  - 34% of the South African population is represented within the working population.

- *Unemployment:*
  –32% level for 1996.

IT Software & Services Market Forecast

Forecast Market growth for IT Software & Services and the Internet / Intranet component are shown in Exhibit 4.

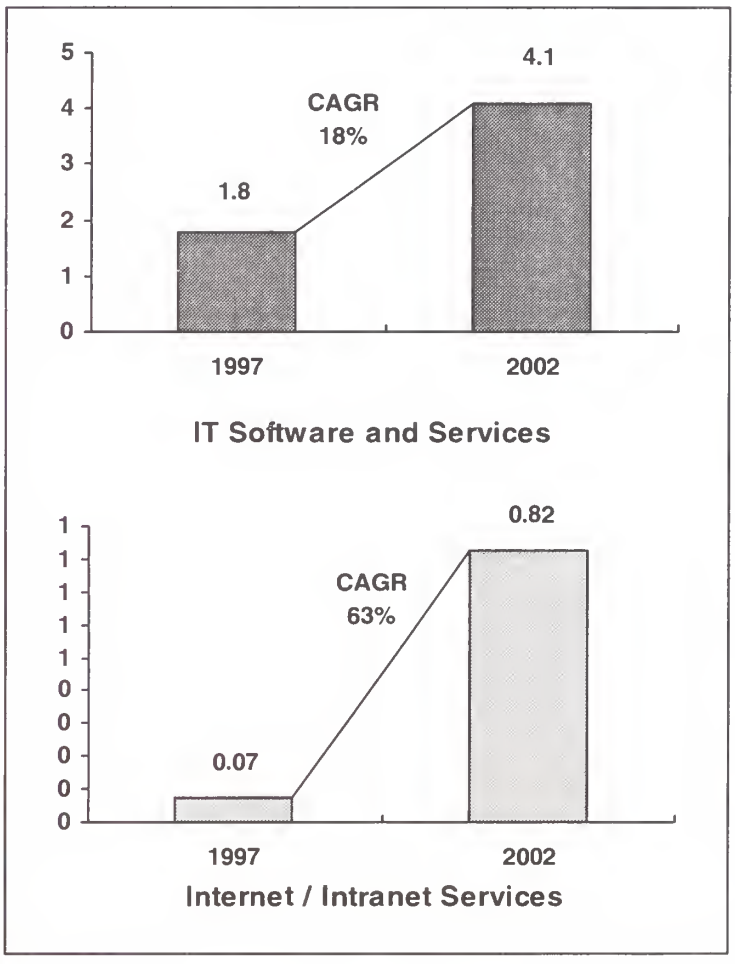
Forecasts for the nine principal categories of information services expenditure in the South African market are shown in Exhibit 5.

Exhibit 6 shows a comparison of growth rates for each service delivery mode.

A detailed forecast of the components of each services category is provided in Exhibit 8.

Exhibit 4

IT Software & Services Growth South Africa 1997 - 2002



Source: INPUT

Exhibit 5

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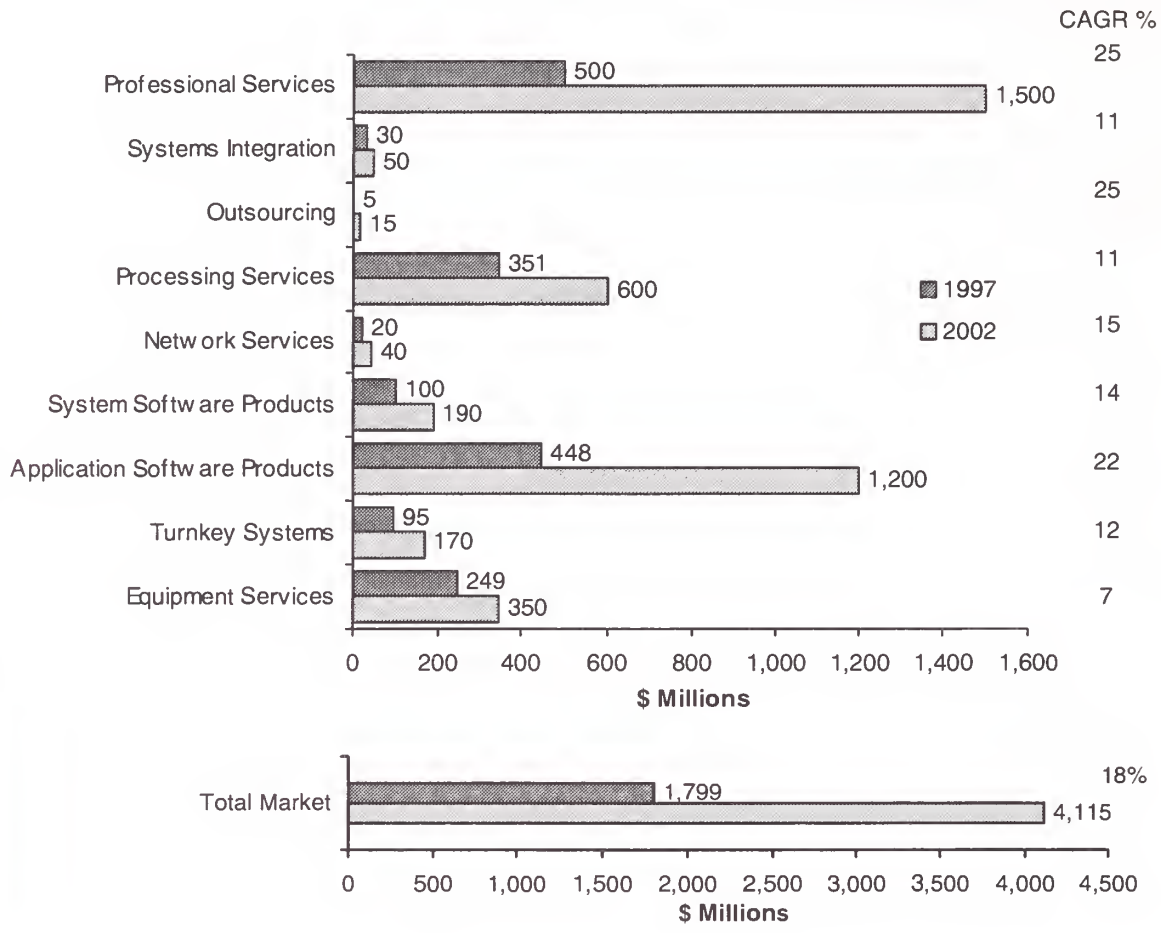
IT Software & Services Market Growth - South Africa 1997 - 2002



Source: INPUT

Exhibit 6

Growth Rate Comparison of Product/Services Category

	South Africa	Middle East / Africa	Worldwide
Outsourcing	25	21	20
Network Services	15	19	17
Application Software Products	14	16	15
Professional Services	25	17	12
Systems Integration	11	13	17
Systems Software Products	22	16	11
Processing Services	11	13	12
Turnkey Systems	12	15	13
Equipment Services	7	14	2

Source: INPUT

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User Expenditures for IT

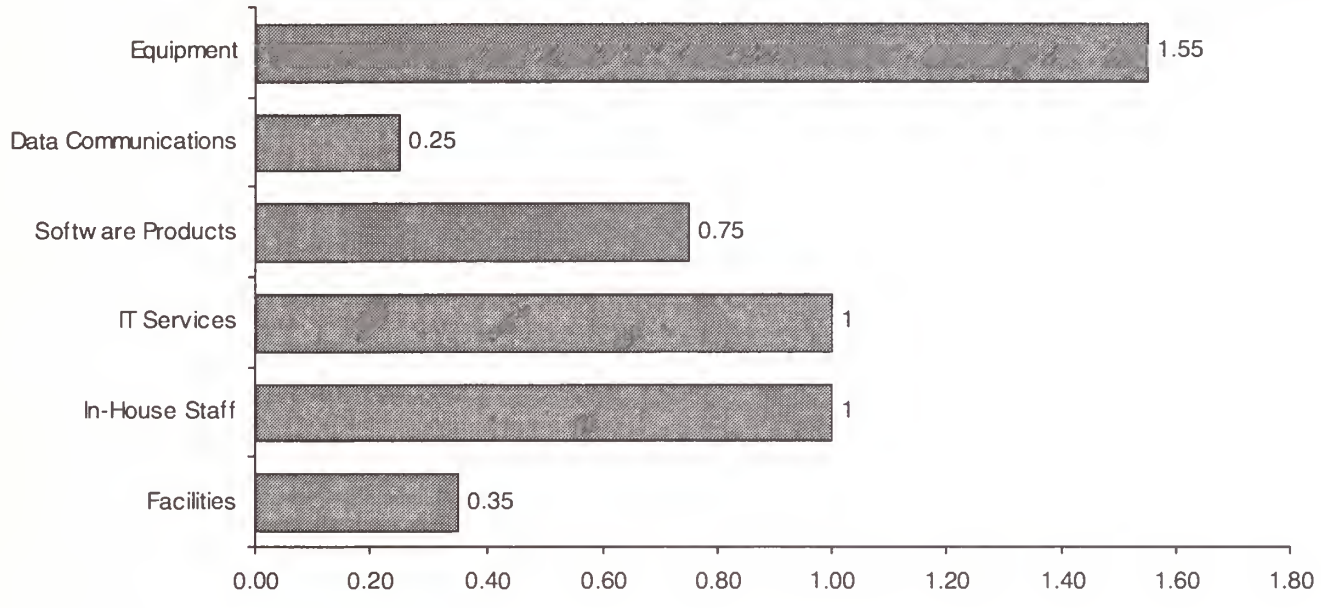
Exhibit 7 provides an assessment of all user expenditures on IT including internal staff and facilities.

In this analysis six distinct components of IT expenditure are recognised.

Exhibit 8 provides a detailed breakdown of IT Software & Services growth rates by INPUT delivery mode.

Exhibit 7

Total Information Technology Related Expenditures - South Africa 1997



Total IT Expenditure $4.9 Billion

Source: INPUT

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Exhibit 8

IT Software & Services Market
Forecast by Product/Services Category South Africa, 1997-2002

Delivery Modes	US $ Million (rounded)								
	1996	96-97 (%)	1997	1998	1999	2000	2001	2002	97-02 CAGR(%)
Professional Services	400	25%	500	625	781	977	1,221	1,500	25%
Systems Integration	26	15%	30	33	37	41	45	50	11%
Outsourcing	4	25%	5	6	8	10	12	15	25%
Processing Services	300	17%	351	390	432	480	533	600	11%
Network Services	15	33%	20	23	26	30	35	40	15%
Applications SW Products	85	18%	100	114	130	149	169	190	14%
Systems SW Products	380	18%	448	547	667	814	993	1,200	22%
Turnkey Systems	85	12%	95	107	119	134	150	170	12%
Equipment Services	235	6%	249	267	285	305	327	350	7%
Grand Total	1,530	18%	1,799	2,112	2,487	2,939	3,485	4,115	18%

Source: INPUT

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